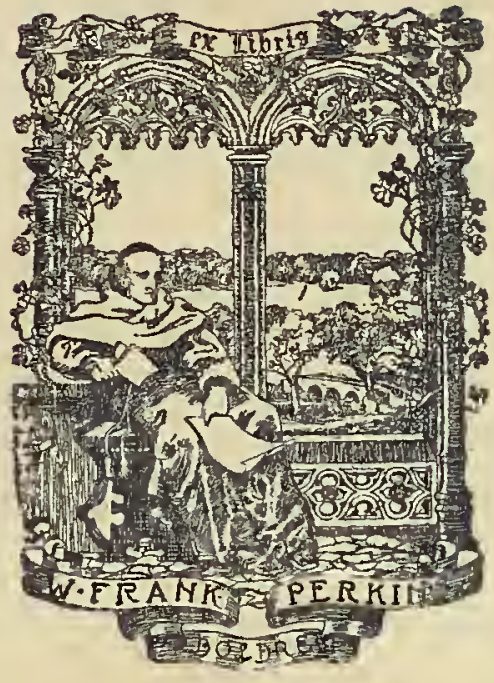
THE REVIVAL OF ENGLISH AGRICULTURE

P. ANDERSON GRAHAM



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BY

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"The Rural Exodus," "The Red Scaur," etc.

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The Revival of English Agriculture

CHAPTER I.

Introductory—The Proofs of Revival.

EARLY in the year 1899 the editor of the *Morning Post* asked me to meet him for the purpose of discussing the advisability of my writing a series of articles in that journal on the more recent development of English Agriculture. His reason for doing so was two-fold. Firstly, the subject had assumed a new and fresh interest. As is the manner of England, the long depression that set in about 1879 had produced nothing but gloom and despair at its early stage. I remember well, when performing a similar task at the beginning of the decade for the *St. James' Gazette*, and afterwards for the *Standard*, how much I was struck with the listless, hopeless air of all who were engaged in the industry. The landlord looked on his estate as if it were the burden carried by Christian; the farmer cursed the hour in which he had taken to tillage; the labourer was piling his belongings on a cart and sullenly making for town. The very atmosphere seemed heavy with distress.

But then the Englishman never quite gives up. He groans and sweats and grumbles under the first blow of

misfortune, but, in good time, the pluck and energy natural to the race begin to assert themselves, and the next thing you see is that he has, as it were, taken his adversary by the throat, and is fighting harder than ever. It has been so during these years. The farmer is still in the act of adjusting himself to the new conditions. To a large extent he has laid aside the traditional methods, and not once for a hundred times before do you hear him vowing that a certain way must be right, because "me and my vather afore me, and his vather afore him," followed it. He realises that he has to serve his own day and generation—not cater for the wants of a bygone time. It is no longer exceptional to meet an agriculturist so broad-minded as to admit that low prices and cheap transit and foreign competition are no curses, no bugbears, but blessings unspeakable to the country at large. England never before was so happy, busy, and prosperous as at this moment. Cheap food and cheap clothing have added immeasurably to the comfort and welfare of the millions who earn their bread by the sweat of their brow. And it is because I so firmly believe this to be the case, that included in this book will be found no expression of sympathy with any scheme that would enhance the price of any necessary of life—to be plain, no word for Protection in any form, or its equivalent, a bounty on wheat. For a kindred reason no lament is raised over what is past and done with. The water that has passed the mill will grind no more corn. Besides, as far as my imperfect knowledge of the condition of the people goes, I do not believe that history can show any time or place when such a huge population, as inhabits our island, was in every particular so well off. Further, it is not the spirit that

uselessly mourns over difficulties, but that which bravely grapples with them, that deserves and ought to receive sympathy.

That is exactly where the interest of the situation lies. Everywhere in rural England one meets, at the present moment, people who are battling with might and main against adversity. The farmers are improving their machinery, taking to new kinds of culture, greedily sucking in the teachings of science, having their boys and girls taught in a manner not thought of twenty years ago—all to beat the foreigner in his task of supplying this country with food. If prices are against him other conditions are in his favour. Not only does population expand, but prosperity has brought with it a greater consuming power and a taste for a higher quality of goods. The sort of man who had bread and cheese for his dinner forty years ago now demands a chop; and he who was content with a chop can afford a chicken. All sorts of cheap and black bread are practically obsolete, and no man is so poor that he cannot afford a wheaten loaf. Take, for instance, such a luxury as strawberries. Within our own memory only the well-to-do ever dreamt of buying them, but now millions of pounds are consumed in the dwellings of the working-man. A certain fastidiousness is the natural consequence of all this. People will no longer be content with fat mutton, coarse beef, or ill-cured ham—they have arrived at a stage when they criticise the quality of their food. Yet all that is good for the English farmer. He has, at his very door, immense town populations that must not only have food, but food of a high quality. Other nations have appreciated the fact sooner than he did, and have been rather in

front of him in supplying what was wanted. But he is learning that he also can do so, and do it better than anybody else.

It would be very difficult to enumerate all the directions in which agriculture has revived during say the last seven years. A few may be mentioned at random, however.

1. Market Gardening is enormously extended to meet the following demands, viz. :—

(*a*) For fresh fruit and vegetables—examples may be found at Wisbech, Worcestershire, or Messrs. Chivers' huge place near Cambridge.

(*b*) For preserved fruit—witness the number of huge jam factories that have been started, and the increased consumption of this article.

(*c*) For cider—which ensures a sale for any overplus from the orchard.

(*d*) For home produce—witness the boxes of garden stuff, eggs, &c., now carried to private consumers by the various railway companies, and particularly by the Great Eastern, and also the growth of markets.

To estimate the increased number of families who now derive an income from this style of cultivation is beyond my powers.

2. Poultry Keeping has extended enormously, and is capable of further and indefinite expansion in the following directions :—

(*a*) Eggs—here the foreigner has beaten us not by greater cheapness, but by better organization, packing, and marketing; arts which our people are only beginning to learn, and that not too quickly.

(*b*) Chickens for the table—the demand is a steadily increasing one, thanks to our commercial prosperity, and for the best class of table poultry we have no serious rival.

(*c*) Other fowls, such as geese, turkeys, ducks, and so on—the Christmas demand for these, at remunerative prices, is many times more than it used to be.

Far more people are deriving their income wholly, or in part, from this source.

3. The Dairy is still very imperfectly organized as far as the manufacture and sale of butter and eggs is concerned, but the milk trade is now greater and better done than it ever was before. Yearly our large towns continue to show an increase of population, and as every new mouth requires feeding, they demand a greater and greater supply of milk. Two things are still wrong with the trade—first, the retail dealer has a grossly unfair share of the profits; secondly, the honest man is placed at a disadvantage by the iniquitous adulteration that goes on chiefly in London, and is connived at by the sanitary inspectors. No doubt there are honest inspectors—one in fifty perhaps—but I have good grounds for estimating that 75 per cent. of the milk sold in London is watered, and that blackmail is levied unblushingly, and almost in the light of day, by certain of the inspectors.

4. Farming, as a whole, is much better than it was seven years ago. I arrive at this conclusion from the following facts:—

(*a*) Although rents have not gone up there is practically no land out of cultivation. Farms are easily let. Nearly all landlords whom I have consulted say that rents are being punctually paid.

(*b*) In many parts of the country I have noticed that those who had small holdings have either taken larger ones or are looking out for them—a very certain proof of success.

(*c*) Those who are in a position to know at first-hand tell me that farmers' balances at the banks for some time past have been, as a rule, steadily increasing.

(*d*) Land is rising in value, and is not now to be had at the absurd prices common six years ago.

These facts seem to justify, in the fullest manner, the statement that there is a real revival in Agriculture. Its immediate cause seems to be that cultivators are adjusting themselves to altered conditions. Those thrive best who fully recognise the virtue of economy in the following directions:—

1. Personal expenditure. The working farmer is beating the gentleman farmer in the race because he is frugal, toils himself, and causes his children to toil.

2. In cutting down intermediate profits, which the present low prices will not stand. I do not agree with all the onslaughts made on the middleman—the shopkeeper has a legitimate part to play, and the average farmer in a tolerably large way cannot both grow and retail his produce. But, as is shown later on in the volume, there is no good reason why the immense profit made by various classes of agents, auctioneers, and similar persons, should not go back to the farmers' pocket.

3. In the use of labour-saving machinery, the adoption of exact scientific methods, and the use of such manures and feeding-stuffs as science has demonstrated to produce the desired result in the quickest manner, and with a minimum of work.

4. In attending to the minor profits that arise from the dairy and the poultry yard, and in rigorously stopping the small leakages on a farm.

It would have been a gigantic task for one man to

go over all England, and describe every farm where these principles were being successfully applied; but we thought it would be of interest to take a few here and there, and show what a brave, and, in many cases, victorious struggle is being made against adverse circumstances.

The second important point of interest in the situation of to-day was the state of the co-operative movement. It was felt that anyone who could help it forward would be doing a valuable service to his country. For all practical purposes an island such as ours, situate in the temperate regions, with a moist climate and abundance of green fields, must be chiefly pastoral in its character. And its cultivators cannot possibly exist by milk alone. To send this article to London and the great provincial towns has become a gigantic business, swallowing the produce of many herds of kine, and affording profitable employment to thousands of men. But after the towns have been glutted with milk, much remains over that must either be converted into butter and cheese or be wasted.

The English markets for butter and cheese are fed by Australia, Denmark, France, and latterly, Ireland; our farmers have in this respect fallen behind the times; they can no longer give the public what it wants. My reason for going so early to a great shopkeeper was to set forth plainly what was the market requirement. It is, for the bulk of the trade, regularity of supply and uniformity of quality. I say for the bulk of the trade, because what may be called its cream demands first of all excellence. But the regular uniform shilling-a-pound butter is the butter of the multitude, and there is no adequate reason why the £16,000,000

we pay for it should not go into British pockets. Co-operation seems the only avenue by which it can pass.

At the same time this is not put forward as a universal panacea—only there are many pastoral districts where it is a necessity. To help to overcome the well-known obstacles that prevent English farmers from uniting was one of our main objects. It is a task likely to be much more difficult here than it proved to be in Ireland, where the occupiers belong to a different class. Yet it will and must be achieved somehow, and it will be a great satisfaction to us if the cause is even slightly advanced by such help as we have been able to afford it.

To the poor upland districts, I regret to say, these remarks do not apply. The gloomy story told here by men like Sir John Dorington and Mr. H. J. Elwes turned out to be only too true. There are districts—of which the Cotswold county is but one—where there is no improvement and little sign of hope, *i.e.*, immediate hope. Yet the gloom in the very worst case can be but temporary. Never has the world suffered long from an over abundance of food, and those who have observed how rapidly the population of the United States is advancing on its wheat supply are more likely to fear dearth than high prices at no distant period. After all, the world's possible wheat area is rigidly limited; the increase of population—that is to say, of wheat consumers—is illimitable.

One other aspect of the question, and that perhaps the gravest of all, has yet to be touched upon. I dealt with it seven years ago in my book, "The Rural Exodus," and there I endeavoured to show some of the causes

that made country people, and especially young country people, forsake the country for the town. It was with ineffable sadness that, looking over what to me are dear and familiar landscapes, I found the process of desertion had been going on at an accelerated speed. Village and hamlet and little country towns continue to decrease, and in many districts the peasantry of England are dwindling to a vanishing point.

It is a matter of the deepest personal interest to me. On other questions it was necessary to consult the great, and, indeed, the fascination of this task was due in large measure to the variety of classes consulted. After listening to the talk of a nobleman, who owns what would be called a princedom in any other country but ours, it is like turning the handle of a kaleidoscope to get into familiar converse with a labourer. Let a great landlord, a squire, or a parson, be ever so sympathetic, he is one in a million if he can really enter into the mind and look through the eyes of his labouring neighbour. I mean to cast no slight on them by saying this ; he is an exceptional man of any class who can see from the point of view of another. To me, it is a shameful thing that any man should be praised merely because he is his father's son and has had a title bequeathed to him ; but if you take such landlords as the Duke of Portland or the Earl of Northbrook, I honour them as men who are zealously performing the duties, and a little more than the duties of their station. But equal praise is deserved by the poor labouring man who performs his little task in the same spirit, who loves a straight furrow and grooms his horses as carefully as if they were thoroughbreds and he a stable lad at Epsom.

Perhaps it is this instinctive respect for a good man,

wherever and whoever he is, that has enabled me to draw into a frank conversation many a son of the soil accidentally met on the field. Some little time ago, while returning from lunch with a justly popular proprietor, I felt a longing for some hard exercise, and the harvesters being at work, walked across to the oat-stooks, and jestingly inquired if a hand was needed. They laughingly gave me a fork, and, pulling off my coat, for a couple of hours or so I tossed sheaves into a long cart. It is not easy work, especially for one who has nothing to harden his muscles except an occasional game at golf, and when the tea interval came I was glad enough to rest on a sheaf of oats beside the owner of him who owned the implement. He was a sun-burned, fair-haired, rough-bearded Saxon in the prime of life, and with a pair of clear grey eyes, over which a gleam of irony passed now and then, as when he said, taking a draught of his shearers' beer,

"It takes little to please the like o' huz." He added patronisingly, "I see, ye can fork a bit."

"But," said I, "long ago, when I used to try this sort of thing oftener, the sheaves were bound with straw and tied with a binder's knot. They seem only to use a bit of twine now."

"It's the self-binder," he explained. "Man, there's nobody left in the country-side now; there'll soon be no use for a pair of hands at all—it's a' machinery."

And so we were landed in the midst of the "Rural Exodus" at once. Luckily he was a native of the district which I happen also to know very well. His own changes had been like those of Dr. Primrose—from the green room into the brown. From the high field where we were it was possible to see the various steadings to

which he had successively flitted—half a dozen of them within the radius of a few miles.

"They move and move till they get to the towns—then they never come back," he said. And on being asked what they did, "Some turn pō-licemen," he went on, "and some stand at bars, and some are porters on the line, and there's a gey few in the bricklaying and the mason line."

He did not share Mr. Rider Haggard's belief that it is a question of wages—it might be so "doon sooth"—which includes East Anglia. He had heard of farm-servants there getting nine, ten, or eleven shillings a week, and wondered not that many went away, but that any could be got to bide. Hereabouts, country wages were as good as labourers' wages in town any day, and the chances of getting on are far better, since a herd or a hind could look forward to obtaining a farm; but "they didna like the life—it was ower hard work and no fun. Why, if a man liked a bit of sport now where could he get it? There wasn't an inch of water not preserved, or a foot of land where you could fire a gun—it was all as dull as ditchwater."

It was a new reason for the "Rural Exodus."

"They shut us out," said the man, "for the sake of a few —— rabbits and pheasants."

Irish landowners fell a prey to the agitator because they too rigorously exacted all that they considered their own; no agitation has succeeded against the English landlord because the majority of them follow a kindly and considerate tradition. I am always sorry to go into a district and find that a policy of notice-boards and exclusiveness has been adopted, especially just now when the only possible way to ameliorate the

ills arising from the "Rural Exodus" is to encourage the townsmen to seek health and recreation in the country. The poor clerk, the artisan, the shopkeeper need this as much as any weary legislator.

The leaders of the aristocracy have set a splendid example, as a few random examples will prove. Few boons are more prized than the miles of free fishing on the Tweed and Bowmont given by the Duke Buccleuch, and it were to be wished that every owner of extensive waters would dedicate a portion to the poor. Lord Salisbury has been praised for many things, but for none more than making the grounds of Hatfield free to the visitor. In the same spirit the owners of the "Dukeries" keep their private roads open. I know of nothing that has endeared the family of Bathurst more to the people of Gloucestershire than the late Earl's generous surrender of his park to the inhabitants of Cirencester. These are splendid examples to be followed by such as out of their abundance can spare the landless a place to picnic in, the sportsman, without means, a few fields' breadths of stream. They gave a tithe to the church long ago; they might well lend a little to the poor now.

As to the "Rural Exodus" itself, to stop it is impossible as long as those engaged in agriculture have to strive hard for a bare subsistence, while commerce enjoys an unprecedented run of prosperity. But history shows that the lean years follow the fat, and one shudders to contemplate what will be the sufferings of those multitudes of city workers when the inevitable period of commercial depression sets in. When the day comes, let us hope that commerce will combat misfortune as bravely as agriculture is doing. I think that those who read even

these slight sketches, will admit that never did any body of men face their difficulties with more pluck and intelligence than the tillers of the soil are showing at the present moment. The one merit claimed for the book is, that however imperfect, it is a record of things done.

It is curious to note how many questions have lost interest in these past years. For instance, the rivalry between Church and Dissent appears to have been succeeded by a great indifference to both. While a few townspeople squabble about Church discipline, church and chapel alike are nearly empty in the rural districts. A strange spectacle! Christianity fading away like a light burning out, and its last representatives fighting over minute points of doctrine!

The Land Question again, that gave rise to so much agitation has subsided for the moment, and no new agitator has taken the place of Mr. Joseph Arch and those colleagues of his who kept the rural districts in a turmoil. Here, too, a listless indifference has succeeded the conflict of many years. Perhaps it is a sign—and to me a welcome one—that the exasperating system of party politics is played out. Every intelligent honest man must be strongly conservative on some points and strongly radical on others, and the day I hope is past when a man will fetter his conscience to that of any shifty political leader.

But if the Revival is permanent, as I believe it must be, since population always creeps up to its food supply, some of these questions will be debated very strenuously at no distant period.

In conclusion, I have to thank a vast number of landlords, land agents, farmers, and others connected with

land for helping me to ascertain the facts, and in some cases, revising my account of them, and also the various writers who have permitted me to use their contributions to the question at issue.

CHAPTER II.

How Derelict Essex was Saved.

THE agricultural history of Essex during the last half-dozen years should be known all over England. It shows, at least, how the best can be made of a bad bargain. Let me recall what was the condition of the county in 1893, the date at which Mr. Hunter Pringle issued his Report to the Commission, accompanying it with the famous map wherein the land out, or going out, of cultivation was shown in black.

THE PICTURE AT ITS WORST.

Here are one or two brief extracts from his concluding remarks :—

"In the present aspect of affairs it is highly probable that during the next few years the area of land out of cultivation in the heaviest districts of Essex will greatly increase, for, as was frequently stated by witnesses, it is no longer a question of rent, but simply an example of the cost of cultivation exceeding the value of produce."

Again: "If three-fourths of the farmers who have served notices to quit in 1894 act on them, thousands of acres will be left tenantless, and it requires a stretch of imagination more than I can make to suppose that new tenants will be found."

Once more: "A common bargain in Essex has been and is, 'I'll let you have such and such a farm for one shilling an acre, you to pay tithe and taxes for three or four years, and then we can make another arrangement.' I was told of a large number of run-out farms let on the above conditions, and, what perhaps is stranger still, I heard of many good farmers who tried the experiment, but gave it up after losing heavily on the bare cost of cultivation."

There is no need to quote more from a document so well known. Those who have the best means of judging say that this gloomy picture was not painted in darker colours than were necessary. A feeling of hopelessness and despair pervaded all—landlord, tenant, and labourer—and it seemed as though land close to teeming London was doomed to revert to wilderness and desolation. And this is no exaggerated or merely rhetorical phrase, for scrub and thorn began really to appear on much of the neglected land, and to make it like what it must have been before the day of enclosure, when it lay there an ancient waste.

ESSEX TO-DAY.

Yet Mr. Pringle's dark prophecy, though he seemed only to foretell the inevitable, has not been fulfilled. I wish to use moderate language, because it would be mere folly to represent agriculture in any part of England as smiling and prosperous, but it may be said, at any rate, that things have taken a decided turn for the better. If the famous derelict map were revised to-day a very great deal of the black would have to be eliminated. Farmers are in better heart. They are not

making fortunes out of land, but they are getting a livelihood and even paying rent. When things were at the worst a great number of Scottish farmers came, the landlords saying: "You can have this holding rent free for a year (or two years, as the case might be), for the trouble and expense of bringing it into cultivation. After that we can see how we get on." The experiment has succeeded; that is to say, the majority of such tenants have done well, and I am assured that most of those who have failed are such as are likely to fail almost under any conditions. It may be of interest to ask how and why this change has occurred during a period which has seen no such improvement in the price of wheat as would make it profitable to bring these disused wheatlands under the plough again.

THE CAUSE OF THE REVIVAL.

The cause of revival has been the dairy, and this chapter of the milk trade deserves the attention even of those not directly interested in agriculture, as it opens up some curious questions of economics. "I am not offering any defence from the point of view of ethics," was a remark made more than once by Mr. Primrose M'Connell, when, at his pleasant farmhouse near Ongar, we were talking of the matter. Mr. M'Connell, it may be said, is something more than a farmer; he is a student of geology, the author of several admirable works on agriculture, and a man of all-round culture. He has also been Secretary of the Central Association of Dairy Farmers. It may be well to explain that as I have made inquiries about the milk trade in several quarters, and am trying to produce the net result, he is in no way

responsible for any statement made here. The success achieved is really a case of combination and centralisation applied to agriculture. As an article of food milk holds a unique position. There is a limitless demand for it, and no foreign importation that need be taken into account. The people in our large towns may buy American flour, Russian poultry, Australian rabbits and mutton, New Zealand beef, Danish butter, and French eggs, and entirely, as far as these articles are concerned, refuse their custom to the English farmer, but they are dependent on him for milk. Of course, this was always the case. But here was the view expressed by Mr. Hunter Pringle in 1893, after consulting the best authorities: "I would particularly guard myself against recommending any palpable expansion of the milk supply whatever. I am convinced that this branch of dairy husbandry has in Essex already assumed dimensions sufficiently large for the welfare of those engaged in it, and I apprehend that to still further add to the output of fresh milk for London would be not only to cripple the affairs of those already concerned therein, but ultimately to destroy the future prospects of milk-sellers in general."

MILK FOR LONDON.

The truth of the matter was that the wholesale prices obtained from dealers by individual farmers were not high enough to leave even a moderate margin for profit. A farmer is not much used to cope with a sharp London dealer, and in his blunt, shy way as often as not made a mess of it. On the other hand, the middleman flourished exceedingly. He sold the milk for at least 100 per cent.

more than he paid for it, and the thought occurred to many that this must leave him more than the lion's share of the plunder, even after a most liberal allowance had been made for the expense of distribution. Evidence of his prosperity was very easily obtained by anyone who took the trouble to glance over the milk businesses for sale in the advertisement columns of any morning paper. As a property a milk business rivals a public-house, and its capital value is reckoned at from £12 to £40 per gallon sold daily. Thus, even a little country business of seventy-four gallons, all distributed by means of two carts, is valued at £1,000, and in another one found in the papers on the day this was written, £600 was given as the net annual profit. What a splendid farm it would be to yield that income in these times! Well, it was determined to operate against the wholesale grabbing of profit by the middleman, and that was the origin of the Eastern Counties Dairy Association, of which the moving spirit was Mr. Alec Steel. Some such organization was really necessary in Essex, because the land is quite unsuitable to the rich permanent old pastures that make dairying so much easier in, say, Cheshire or round about Swindon. The production of milk is therefore a very much more expensive process here.

BY MEANS OF COMBINATION.

The Essex farmer had either to get a better price or starve. It was made a condition of membership that no contract for supplying milk should be made under a certain figure, though there was no objection raised to each obtaining as much more as he could. Obviously, if all farmers were united it would be in their power to

enforce this, and the danger, of course, lies in the temptation it may provoke to operate against the consumer—a very serious matter when the food supply is concerned. But so far they have directed their efforts solely against the middleman. They have certainly succeeded in obtaining better terms. Curiously enough, too, it is the district where milk is sold in "ha'porths" and "pen'orths" —the great area of poorer London fed from Liverpool Street and the stations on the G.E.R.—which pays the farmer best for milk, while the West End, getting its supply from Paddington Station, gives less, the difference coming to rather more than 1½*d.* an imperial gallon. As the price used to range from about *7d.* in summer to *9d.* in winter, this obviously represents a large percentage. Early in 1899 the contracts for the Midlands ranged from 1*s.* to 1*s.* 6*d.* the barn gallon; those of Essex from 1*s.* 3*d.* to 1*s.* 9*d.* The selling price is nowhere less than 4*d.* a quart, so that the middleman obtains 2*s.* 10*d.* for what probably cost him 1*s.* 5*d.*, or 100 per cent. still.

Perhaps it may save the general reader from being puzzled if I here draw attention to one of the minor grievances of the farmers. This is the insistence of the dealers in making their contracts for the barn gallon. It is, in fact, an illegal measure, but they get out of that difficulty by inserting in any official document "per seventeen imperial pints." The imperial gallon is eight pints, so that the barn gallon is two of the other with one thrown in. This make-weight is in the milk trade what the thirteenth is in the bookseller's dozen, and as fruitful a source of petty fraud and bad feeling. No doubt there was some excuse for it in old days, when there was no cooling apparatus, and milk was dispatched

hot from the cows' udder. As it cools certain gases escape, and it shrinks in bulk, so that the additional pint in sixteen was probably added to make up for this appearance of loss. But nowadays at every dairy farm the milk is cooled artificially, and the bulk on arrival is exactly what it was at dispatch. The imperial gallon, therefore, is the just, natural, and legal measure.

THE BOUNTY SYSTEM.

To return, however, to the milk trade—it is plain that the farmers could not get on if they had not power in some way to enforce their terms. What they do is this. If a farmer be unable to procure the terms that have been agreed on as a minimum, they say to him: "Keep back your milk, feed pigs or calves with it, turn it into cheese or butter; if the worst comes to the worst run it down the sink until you get reasonable terms. Out of our funds we will pay you the price for a week, a month, or even longer. It is more to our interest to do that than to let the price get lower." Politically the majority of these Scottish farmers are ardent Free Traders, and they would probably be unable to defend this proceeding in a debating society. But, as one of them said to me, "the grand argument in its favour is its success." The dealers have given better terms, and have not as yet raised the price to the consumer. And so far the bounty system has made no heavy tax on the resources of the Society—twenty-five pounds a year covering the expenditure. But then it is a weapon, the possession of which imparts moral courage to the farmer, and has a correspondingly depressing effect on his antagonist in the game. Certainly there seems nothing

to find fault with just now. Unless the farmers obtain a certain price they cannot keep the land in cultivation, and they are as much entitled as any other class to take such legal measures as they think fit. At the same time, it would be idle to deny that the farmers have discovered a weapon, of whose full power they are not yet quite conscious. Indeed, it is not yet perfected. Milk pours into London from many independent sources, and as long as the majority of these are out of their control the strongest union will not be able to go far. However, it is very easy to propagate a doctrine of combination when a substantial and palpable reward is offered to the convert. And if it should happen that they obtain complete control over the milk of London and the great provincial towns, it is to be hoped they will have the wisdom and moderation to take no steps that would cause the poor to stint themselves of a cheap and nutritious food. Already what has been done in East London is being attempted in Manchester and other great centres.

ADULTERATION.

Another danger is that the more unscrupulous dealers will adulterate largely, and it is alleged in many quarters that this is already being done to an enormous extent. The Government system of inspection is said to be entirely inefficacious. When an inspector wants to find out whether milk is being adulterated or not, he is said first to send a post-card to the dairykeeper and then to stroll round. I do not pretend to have seen these things myself, and so refrain from repeating the stories retailed to me, but I am assured, on what seems to be excellent authority, that adulteration is carried on wholesale, and

that the inspectors take little pains to expose it. A suggestion that has been made is for the Government to adopt a system of changing a man's beat as they do in the Customs and Inland Revenue. If he has time to form friendships and aquaintances among those whose conduct he has to overlook, you may be pretty sure that he will soon relax the strictness of his examination.*

THE QUESTION OF LABOUR.

The one great cloud that threatens the further development of the industry is the scarcity of rural labour. I hope to go into the matter more fully later on, but a singular illustration of it was given to me by Mr. M'Connell. It is a custom in Essex for corn to be thrashed by a steam thrashing machine which wanders from one farm to another during the winter months. About a dozen hands are needed in connection with it, and so difficult was it to secure these in 1898-9 that the people were glad to secure the services of tramps and gangrels. One of these, having retired to sleep in an outhouse at Ongar Park Hall, appears to have carelessly used a lamp or a pipelight and set the place on fire. As he was himself burned to death, it is impossible to say exactly how the accident occurred. Usually there is no

* Since making the cautious statement above I may say that the fullest proof of the assertion has been afforded me. The vendor of a certain milk business informed the purchaser in the most friendly spirit that the profit shown in the accounts was made by adding to every churn a proportion of water. Certain inspectors make a point of calling on every new man to ask if he is friendly,—friendly being interpreted as the payment of two cheques per annum. This scandalous state of affairs is to my own knowledge perfectly well-known to many official persons, and is of course the common talk of the trade.

difficulty about getting hands for the thrasher—in 1899 it was almost impossible, and farmers in Essex suffered to a greater extent than they ever did before from the steady moving away to town of the rural population. They attribute this chiefly to an abnormal activity in the building trade about the London suburbs, and the fact that more wages can be earned at bricklaying than at farm labour; but I hear accounts of the same kind from various parts of the country. I cannot go fully into the matter now, because it forms by far the most serious aspect of the whole question. At least one dairy farmer in Hertfordshire had to sell his cows and buy sheep because milkmen were unobtainable.

CHAPTER III.

A London Shopkeeper on English Butter.

Great Britain's bill for imported butter in 1898 *amounted to* £15,960,571.

It seems to me an extraordinary paradox. For twenty years we have been steadily turning our wheat lands into grass. We have pastures, cows, dairymaids, and experts equal to those of any country in the world. At their very elbow are the most gigantic markets. And yet farmers abroad, handicapped by distance and the cost of transit, cut us out in our own ground. They supply us with butter alone to the extent of £16,000,000 worth annually, and those in the heart of the trade say that English butter is in the way of disappearing from existence. Clearly a true explanation of this deplorable state of affairs can only come from those engaged in the business. It is they who reject the one and choose the other. Still, no blame can possibly attach to them. A great merchant is in the hands of circumstances; he cannot dictate, he has to obey the laws of supply and demand, and it is at his peril to disregard them. Yet, as the English farmer, if he would recover lost ground must set himself to master the requirements of the market, it seemed to me the right course to get hold of a large dealer in butter, and ask the why and wherefore of his proceedings.

INTERVIEW WITH MR. HUDSON.

Selecting for this purpose Mr. Hudson, senior, of Messrs. Hudson Brothers, I was lucky enough to see him surrounded with cheese and butter and eggs in his place in Ludgate Hill. My first question was directed to the quantity of butter he dealt with, and his answer was, "about forty tons a week."

"Of which how much is English?"

"English butter is getting to be almost unknown on the London market," he replied, and on seeing a look of something like surprise on my face he repeated this statement with emphasis, and added, "Just now it is nearly all Colonial and Normandy."

Then he sent for an anchor of New Zealand butter, and asked me to taste it, while he expatiated on the convenience of cold storage.

"Isn't it beautiful?" he asked; and, indeed, there was no denying that it might have pleased Mrs. Poyser herself, for it had the clean, sweet fragrance only to be had from cows that have stood knee-deep in clover. "You see it is summer there," he went on, "and the cows are out in the meadows, while ours are eating turnips and mangold, and we have it as fresh as it leaves the dairy. As soon as made it is put into cold storage at the factory, it remains in cold storage at the wharf while waiting for transit, there is cold storage in the ship, and we put it into cold storage as soon as we receive it. Thus it is every bit as good as if it had been churned in Dorsetshire yesterday."

REQUIREMENTS OF THE BUTTER TRADE.

I always feel bound to protest when the reputation of the British dairymaid is assailed, and I remarked stubbornly that good as the butter was, our own people could produce still finer.

"There I perfectly agree with you," said Mr. Hudson. "No butter in the world is superior to the best English, but there are two essentials to our supply without which business cannot be done. These are," and he spoke in the tone of one who very well knows what he is saying, "regularity of supply and uniformity of quality."

The word uniformity he came over and over again, as if determined to impress it.

"Our customers," he said, "are not what they used to be, as I remember them at Newgate Market forty years ago. In winter the supply nearly always ran short, and the butter would have that disagreeable sharp flavour that comes from feeding with roots. They would come to the shop and complain about it, and I would say, 'Well, it is a bad season, and we have done the best we can,' and they would be satisfied. But the consumers are not so easily done with now. Suppose you were a customer of mine, and had a pound or two pounds of the best quality sent you every week, you would expect it to be not only of exactly the same flavour, but even of the same tint. Now the best dairymaid will not produce identical qualities twice in succession. But we can depend on them absolutely in our Colonial and Continental supplies, *i.e.*, either when the butter is made in a factory or shipped to us by a large dealer."

UNIFORMITY AND REGULARITY.

He then went on to describe a foreign market, with the butter women sitting with their supplies and a buyer going round to taste and purchase. He divides the butter into three or four classes. "Yours is not up to the mark. I'll give you this price only," he says to one. "This will do; I'll have it at the top price," he says to another, and so on. But he grinds his first lots all up together, so that he obtains a uniform fine quality, and he grinds his seconds to obtain a uniform second, and so with the third and the fourth. Finally, he dispatches these in boxes, branded with different colours, to the great convenience of the buyers on this side. When butter is made in large factories, a similar result is achieved by different means.

"Now, about the regularity of supply," went on Mr. Hudson, "what happens is this, we cannot get English butter in winter, but in May and June there is an overflow, only our arrangements are made elsewhere, and we are unable to take it, so that it has to be sold to others at an inferior price."

"So that you don't think the prospects for English butter-making very rosy," I suggested.

"The English farmers are not troubling about it," he said; "they prefer to go in for the milk trade. It is more profitable, and it is bound to increase with the growth of the large towns. Then, it is a convenient trade, with a quick turnover. I speak as a farmer as well as a shopkeeper," he went on. "At one time I kept a small dairy of about thirty cows myself. My experience was that to get a fine butter in winter I had to feed expensively with oats, the finest sweet hay, and

a little linseed ; but the butter cost me 2*s.* a pound, and that was out of the question for commercial purposes when we could get as good from Australia made when the cows were at grass."

A RAY OF HOPE.

Hitherto his views on the English butter question had been far from sanguine, but it seemed to me that a gleam of light broke from the remainder of the conversation.

"And do the Australians send butter to you all the year round?"

"Oh dear, no," he replied, "the trade stops entirely early next month (June), and is off for six months, but the Normandy butter is then at its best—our orders for that are very much enlarged."

"Might not the English farmers come in here?" I suggested. "You say there is an overflow in May and June."

He was not willing to accede.

"They have not learned the lessons of regularity of supply and uniformity of quality," he said, and added that the only chance for them lay in co-operation and large factories. He then instanced the Irish supply as a case in point. Up to within a few years the Irish farmers had been more careless than the English about the manner in which they sent their goods to market. Now they make excellent butter, and it arrives as regularly and as well packed as any Continental supply. He did not mention Mr. Plunkett's name, but this was certainly a weighty testimonial to the value of that gentleman's exertions.

I could not help thinking that what had been accomplished in Ireland was possible in England, though what we need most just now is a leader of standing and influence to set the matter going.

"The means of keeping dairy products fresh are so vastly improved," said Mr. Hudson. "The addition of a little boracic acid has no effect on the taste or quality of either butter or milk, but it enables the farmer from a distance to send his supplies as fresh as they are in the cow-house. It benefits equally the English dairyman and the Norman butter-maker."

PRODUCTION OF CHEESE.

Further, he suggested that it might pay the farmer to go in more for cheese-making, though the demand for cheese is probably a little on the wane, while that for both milk and butter is expanding. He instanced the history of Cheshire cheese as an example of the manner in which a dairy product might lose its market. Up to about the year 1840 it was the prime favourite in London, but at that period an outbreak of cattle disease interrupted its manufacture for a time, and afterwards it was not so carefully made. As a consequence it went completely out of vogue in London, and now those who make it find their market chiefly in Manchester. Until frozen meat became so cheap the common kinds of cheese formed an ordinary part of the working-man's diet, but he eats far less of it now. There is, however, a great demand for what one may call after-dinner cheeses, in the production of which England has never been excelled.

DANISH EGG SUPPLY.

Only one other point in Mr. Hudson's interesting conversation do I wish to allude to, and it has an important bearing on the subject. It illustrates the rapidity with which a new trade grows in our time. As I was going away he asked me to look at his eggs, particularly those from Denmark. Five years ago, he says, as far as he was concerned, the Danish egg was non-existent, and on turning up the Trade and Navigation Returns I find that, whereas a few years ago the value of eggs imported from Denmark was almost nil, in 1898 it had risen to the enormous total of £685,447. He showed me how beautifully the eggs are sent, arranged by size—16 lbs. to the 120, and so on, and packed not in straw but in kiln-dried shavings, and each egg stamped so as to show the branch and the number of the sender. For this magnificent egg business is an achievement of the large Co-operative Association established at Vejle, in Jutland, in February, 1895.

THE FOREIGNERS' BILL.

This conversation carries a moral that needs no driving home. Last year there was imported into England, taking only the chief dairy products and reckoning them by their value, the following goods, viz.:—

Butter	... ...	£15,960,571
Cheese	... ...	4,970,247
Eggs	... ...	4,456,123
	Total	£25,386,941

Now, if you split the totals into their component parts, it will be found that where the biggest supplies come from there co-operation flourishes most. In butter, Denmark heads the list with £7,359,831, and Denmark has no better climate, no agricultural advantages whatever over England; but it is famous for the co-operative bodies developed during the last twenty years, *i.e.*, after the time when it became apparent that wheat growing in Europe was ceasing to be profitable. Through the same agency it is rapidly advancing to the front in the egg trade with £685,447. £8,000,000 from the export trade must considerably ameliorate the depression of the Danes.

France comes next with a total of £2,183,845 for butter, and in 1897 there were in France no fewer than 1,371 *Syndicats Agricoles*, or Agricultural Associations, formed, says a recent and well-informed French writer of the *élite* of French Agriculture. There, too, it is evident that the value of combination is very fully appreciated. And anyone who will take the trouble to follow out the sources of our food supply will find that they grow in importance in proportion as co-operation prevails.

LESSON FROM IRELAND.

To go no further away than Ireland, we find that prosperity has been recovered for that country mainly through this agency. Its history forms an object lesson to all who are interested in agriculture. But in England there is a singular hesitation about following in these plainly-marked footsteps, the truth perhaps being that the English farmer has been so long accustomed to take the lead that he does not care to follow anyone. For

many years past a few enlightened agriculturists have with hesitating steps turned in that direction, but the movement has not as yet assumed large proportions. Such experiments as were made were ill-timed, and not in all cases well-considered. The various profit-sharing farms, for instance, lost their attraction when it was discovered there were no profits to divide. But from the beginning such co-operative farms as were successful were nearly all connected with dairy work, the nature of which renders it especially suitable to this method of transacting business. And the dairy cannot thrive on milk alone. It is all very well to say this is the most profitable trade, but the fact is notorious that though the demand for milk is increasing, the supply grows still faster. If there is too much competition no amount of combination will maintain prices at a remunerative level. Even in it, as we have seen in a previous chapter, combination is necessary to prevent such anomalies as that, while the farmer is barely able to eke out a subsistence, the dealer by his own account is paid £600 a year and all expenses for distributing seventy-four gallons of milk daily.

But the more one looks into it the more it becomes evident that to meet the market requirements of the present time and have that regularity of supply and uniformity of quality insisted on by Mr. Hudson, an adoption of the co-operative or factory system is imperative. The English dairy farmer is in some respects too big a man to do this at once. He does not care to mix his milk with other people's, and to join with them as the little Irish tenant did. It is his tradition to depend on himself alone, and it is more difficult to induce him to join in with his neighbours. So far many meetings

have been held, and many opinions expressed in favour of combination ; indeed, as far as buying is concerned—particularly the purchase of artificial manures—little difficulty has been experienced in securing co-operation, but for establishing factories and selling produce advance is made very slowly. What is wanted most is a vigorous leader—one not easily daunted by theoretical difficulties, and who possesses the necessary weight and influence to insist on the truth that co-operation is a necessity imposed by the circumstances of the time.

CHAPTER IV.

Jersey to the Rescue.

READERS have now been made fully aware of the grocer's view of butter, as it was epitomised by Mr. Hudson. The supply must be regular, and the quality uniform; conditions met by foreign and colonial factories, but not by English dairies. English butter, is in fact, ceasing to have any hold on the London market. In Mr. Hudson's opinion the time is coming when not a single pound will be sold. The average farmer has also had his say, and he is inclined to give up butter-making. Milk is worth about fivepence a gallon to him, and it takes three gallons to make a pound of butter, for which the wholesale price is about ninepence, so that butter-making is ruinous. But when recording these views I was well aware that there was another aspect which is more hopeful, and to obtain an authoritative expression of it, I paid a visit to Chequers Mead, the residence of Mr. Ernest Mathews. Probably, the name is not familiar to the general reader, but it is one to conjure with in agricultural circles. A word about him and his surroundings may not be out of place, inasmuch as it will show how the scientific new husbandman differs from the old.

CHEQUERS MEAD AND ITS TENANT.

Standing on the lawn at Chequers Mead, you might fancy yourself in one of the most secluded rural districts in England, though, as a matter of fact, it is not much more than an hour's drive from the Bank of England. But no other habitation is visible. All around is a characteristically beautiful Hertford landscape, diversified by hill and hollow, pasture, tilth, and green wood; and the June air is musical with whistling nightingales and blackbirds. The land adjoining Mr. Mathews' house is rented from the Duchy by Mr. Mathews, who, however, follows husbandry not for a livelihood, but from love of it as an art. Just as a man takes to paint, or ink, or music, so he has taken to farming. There is no more pleasant occupation. It takes a man into the open air, it puts him in the way of enjoying rural sport, and all the while he knows that even when he is amusing himself the work is going on. If a merchant closes his premises there is a complete stoppage, but lambs grow and stocks fatten and crops ripen day and night, Sunday and Saturday. This was always true, but science has added new attractions to the farm. In place of old tradition it establishes the connection of cause and effect. The farmer of to-day has new tasks and new interests. If he will only observe and record he is certain to reap the benefit. A single illustration will show what I mean. There are certain questions concerning the average yield of cows, the ratio of milk to butter and so on, that I have asked many people. But seldom can the ordinary farmer reply with more than a guess. It was a delightfully new experience when Mr. Mathews produced a book wherein is duly

chronicled the yield of each cow, her period of lactation, and the butter ratio, *i.e.*, the amount of her milk required to make one pound of butter. Speculation in this way is being gradually replaced by accurate knowledge. This is the characteristic feature of modern scientific farming. In Mr. Mathews' case theory and practice go together. He has won innumerable prizes himself at shows where now he so frequently acts as judge. His own dairy, too, is a model. I do not mean in the way of building, for the Duchy is not prodigal in this respect, and the whole appearance of the farm-place, which is at a distance from the house, is most homely. But then it is clean. Mr. Mathews' beautiful Jerseys are kept wholesome and comfortable, the dairy itself is without a speck of dirt, and the aspect of the place assures one that everything is done thoroughly there. That, in some measure, may be attributed to the care and diligence of the Scottish servants. Mr. Mathews, like many other farmers near London, finds the question of labour most difficult. The higher the wage the more money is spent on drink, and his experience is that, as a rule, Scotchmen are more conscientious workers and far more abstemious than those born in the immediate neighbourhood. Lastly —and this is the most important point of all—despite all that has been written, Mr. Mathews, close to London, is able to make and sell English butter at a profit, so that he is in every way entitled to speak with authority on the subject.

BUTTER, MILK, ETC.

It would be impossible to put our conversation into the shape of question and answer, since it took the form

of a desultory talk lasting several hours, during which we were walking over the farm, stopping every now and then to admire a flock of handsome Southdowns, to look at the crops of corn and grass, the horses, cows, and other live stock. But the substance of it is as follows: Mr. Mathews does not believe that factory butter will continue to satisfy the English trade. It cannot in the nature of things be excellent in quality, since it is a compound of many kinds of cream, mixed together and reduced to an average. Uniformity he dismisses as a grocer's shibboleth. It means no more than an overworked coloured mixture. Besides, he has doubts about the purity of imported butter. Not long ago it was shown that out of 25,000 tons of margarine manufactured in France only 5,000 tons were sold as margarine, and that the remaining 20,000 tons were mixed with butter and in that form exported or sold as pure butter. It seems that about 20 per cent. of margarine can be mixed with butter without being detected. France sent England 23,380 tons of butter in 1896, and probably a large proportion of this was margarine. Mr. Mathews believes that a large proportion of the Danish and other butter is equally adulterated, but whether the mixing takes place in the country of origin or here he cannot say. And, indeed, if it be considered that labour and rent—especially since rents were lowered to such a degree—probably amount to about the same in both countries, while the foreigners have an extra payment for freight, it stands to reason that they cannot produce an honest butter cheaper than we can. They are very reticent in regard to facts, or otherwise it would be possible to say exactly what they can and what they cannot do. The butter ratio of their cows is known, and it would be

easy to decide whether or not their methods are legitimate if they would disclose how much they pay the farmer for milk. Our problem is to produce a superior article at a price not unreasonably enhanced. Mr. Mathews holds that English farmers deliberately threw away the butter trade. About twenty or thirty years ago large numbers of them began to appreciate the possibilities of milk, and went heart and soul into the business, which was lucrative and brought quick returns. Now that milk is being overdone, it will be difficult, but not impossible, to recover the butter trade. The first thing to be attended to is the cow. For this purpose Mr. Mathews divides all cows into three classes—the general purpose cow, the milk cow, and the butter cow. Of the first he has no good whatever to say. Before the advent of frozen meat it had its place—it yielded a certain amount of poor milk, and usually could be fattened and sold without showing any loss, although in his opinion it is very doubtful if it ever made a profit. It is a general complaint among farmers now that prime beef is in almost as great demand as ever, other meat can scarcely find a purchaser. Even the Unions prefer to buy the frozen joint, and the old cow and ewe are worthless. For these reasons he utterly condemns the general utility cow as entirely unsuited to modern conditions. The milk cow stands on a different footing. If a farmer has a good milk business by all means let him keep Shorthorns, or any other good milking breed, and give up the idea of making butter. The best butter in his opinion comes from the cows of the Channel Islands. Indeed, it is scarcely necessary to mention that Mr. Mathews is an enthusiastic believer in the Jersey. Many beautiful specimens he has in his possession, and

it was a great pleasure to hear so fine an expert dwelling on this point.

IN PRAISE OF JERSEYS.

The average dairyman is accustomed to look on the Jersey more as a gentleman's cow than one for his purpose, but as a butter cow she has the following points: First, she is of small size. In the island her average live weight is only from 800 lbs. to 850 lbs. Long use in the dairy has in the course of generations developed her udder and milk veins at the expense of her sinews. What a framework of bones even a fine Jersey looks! Then she is easily fed, produces a calf before she is two years old, and goes on afterwards giving the richest milk as long as she lives. It takes under 19 lbs. of her milk to make a pound of butter, while it takes 28·50 lbs. of milk in Denmark and Sweden and 25 lbs. in Brittany. To put the case a little differently, while in Holland, as on our own farms where Shorthorns are kept, it takes three gallons of milk to make a pound of butter, less than two gallons of milk from a Jersey cow are sufficient. Again, her butter is beautifully coloured naturally, but Danish butter is "prepared" to suit the various markets in England. Manchester likes a pale butter; Newcastle, straw colour; and Leeds, a dark waxy colour. But if butter be artificially coloured then obviously it is easy to pass off the pale, inferior sort as the best. Mr. Mathews holds that colouring is in itself a kind of adulteration, and may easily be used as a cloak for less innocent practices. The point is certainly a very important one. Since foreign butter sent to the English market is coloured and treated with preservatives,

though sold as fresh, it should be compulsory on the vendor to avow these facts and sell it as coloured and preserved butter. Uniformity would be then seen to be largely a matter of colour.

THE POLICY TO BE FOLLOWED.

It must be admitted that Mr. Mathews has placed the situation in a fresh and interesting light. The matter hinges to a great extent on price. Mr. Mathews is sure that the finest quality of butter cannot be made either in this or in any other country to be sold at a shilling a pound. Further, factory butter can never be good enough to satisfy a fastidious taste. The ever-increasing middle classes in comfortable circumstances demand something better, and that they do not mind paying more for a home product of assured excellence is capable of absolute proof. When Mr. Hudson, for instance, speaks of English butter vanishing from London, he is thinking only of the grocers' shops and of the vast multitude of ordinary purchasers who are satisfied if they can obtain a moderately good article at a moderate price. But he has no means of reckoning the large and growing quantities sent direct from the farm to the consumer. I have statistics that give a most striking proof of this increase. All that need be said now is that, despite the popularity of Danish and Brittany butter, an enormous number of the well-to-do prefer to have English butter from an English homestead. It is also worth remarking that after having looked into the concerns of many dairies in many different counties, I have not met any maker of first-rate butter who has experienced the slightest difficulty

in finding a market for it. This goes to show that a wide field is open to anyone who will follow the advice of Mr. Mathews, *i.e.*, procure the best cows, adopt methods for turning out the best butter, and charge the top price for it. Of course, a difficulty is that of managing the sale in a large way. The little man, who keeps perhaps half a dozen cows, can sell the produce at retail prices easily enough, but on a great scale this would be difficult. Mr. Mathews suggests some kind of co-operation by which a central emporium in London could be opened, making the exclusive sale of the finest farm goods a speciality. Every purchaser would have a guarantee that what he bought was English, and of the best. In my own opinion, however, it was doubtful policy in Lord Winchilsea to attempt to combine farming and shopkeeping. There are plenty of men of enterprise who would take up the selling part of the business if the profits show them a lucrative return. Mr. Mathews gave me a few facts to prove that a Jersey cow is a very profitable animal if well-made butter from her can be sold at from 1*s.* 3*d.* to 1*s.* 7*d.* per pound. From inquiries made of the members of the Jersey Society, it is found that a cow under five years old yields 260 lbs. of butter a year; when over five, 320 lbs. His conclusion is that "with ordinary luck a Jersey cow should pay for herself over and over again with her calves and dairy produce during her lifetime." There is no need to commend this opinion, coming as it does from the owner of a herd who is at the same time a practical farmer and a judge of acknowledged authority in all things pertaining to agriculture.

CHAPTER V.

Lord Fitzhardinge's Dairy.

THE Vale of Berkeley has ever been one of the most fertile spots in Gloucestershire, famous especially for its single and double cheeses and its excellent bacon. The late Lord Fitzhardinge, though best known, perhaps, as a strenuous sportsman, was also a first-rate agriculturist, and a particularly good judge of stock. Naturally enough, then, about sixteen years ago, when attention began first to be seriously turned towards the development of the dairy as a substitute for wheat-growing, which for some time past had been a declining industry, he was keen to try one of the modern experiments, and, for that purpose erected, at a cost of between £2,000 and £3,000, a large and convenient dairy at Berkeley, just at the time when Lord Vernon was beginning his at Sudbury. At first it was intended largely for cheese, but the demand for cheese as an article of diet is a diminishing one. It does not rise in price, though the production keeps shrinking.

HISTORY OF THE DAIRY.

The chequered career of this dairy is well worth the attention of those who are contemplating the introduction of co-operation into agriculture. At first it was a

dead failure for reasons that are painfully obvious now. The modern dairy was then in its infancy, and the managers of the concern had scarcely any idea of prices, profits, or returns. The business fared no better in private hands. It was taken up by a well-known dairy expert, an acknowledged authority and the author of several valuable works on his own subject. But, though he could tell others what to do, he does not seem to have had the gift of doing things himself, and once more disaster overtook the dairy. Yet there were several men who grudged to see the buildings and appointments wasted. Among these persons were Lord Fitzhardinge's agent, Mr. Peter, and one or two others equally shrewd. After some little discussion it was resolved to form a Company, and carry on the work of dairying. It is not a co-operative business at all, but purely and simply a private Company managing a most lucrative private business. It does exactly, however, the same work as a co-operative society might do, and, as a matter of fact, it was offered to the farmers as a co-operative dairy some years ago. The offer was not accepted. Only one man came forward, and he was admitted into the business as a shareholder. Probably the farmers would jump at it now, but the Company is no longer eager to surrender.

WHAT MIGHT BE DONE.

In a few words it may be possible to show what is being done, and what might be done by co-operation in every pastoral district of England. First the Company buys up the surplus milk from the farmers. This is a very important matter, as so much milk is being sent into

the towns that there is a constant danger of the trade being overdone, and prices reduced below a profitable point. As it is, during the months of May and June, when there is a flush of milk, a great deal finds its way to the sewers, or is sold for half-nothing to the Jews, who make a kind of cheese out of the putrifying liquid. In the second place it does a trade by supplying accommodation milk. That is to say, if the supply should run short in any town within its range, on a telegram being sent, the Company can always make up the deficiency. Of course this means good profit to the dairy, as the milk sold for retail brings more than it would as butter. Yet butter-making is the Company's most important business. One need hardly say that it is not a gigantic concern, but the manageress told me that on an average she turns out about 1,800 lbs. a week. It is fragrant and beautiful butter: made, too, in the cleanliest way, and after the most modern and approved fashion. It is a pleasure, therefore, to say that it has a full and growing market, mostly in the midland towns, in Birmingham, Worcester, Leicester, Northampton, and so on. To London a small quantity is sent, mostly to private customers, who have some local connection, and like a regular supply of the home products. The business is therefore open to limitless expansion, though, perhaps, if much more capital were invested it is doubtful if the rate of profit would be kept up, as it is very high indeed just now.

THE "CO-OPERATIVE PIG."

There are other advantages that a co-operative body might reap. Lord Fitzhardinge's agent, for instance,

makes a very fine thing out of the pigs fed chiefly on skim-milk from the factory. Last year was not a good one, but the profit on them, after very rigorous deductions had been made, amounted to over £150. Very fine pigs they looked in their fattening styes, three or four hundred, perhaps, though this is only a guess, as I have forgotten the exact number. Now the money from this business passes into the hands of a private Company to which Lord Fitzhardinge belongs. Is there any reason why the farmers should not have it themselves? None whatever. During the course of this inquiry I did not hear two opinions expressed about the merits of co-operation. It is the one thing absolutely needed to enable us to cope with existing difficulties. Everybody says it must come, and the only thing retarding it is the proverbial slowness of the English farmer. Even he, however, is perfectly well aware that unless the unforeseen happens his sons and daughters must co-operate. Why cannot he shake off a little of his usual apathy, and take the inevitable step at once? Wherever I went almost the same tale was told. Some enterprising landlord or individual has made the way clear, and the farmers have been asked to co-operate. In theory they quite agree, but they will not carry their ideas into practice.

To some extent it may be noted a private Company does the work of co-operation. It can arrange for a regular supply, and it can produce uniformity of quality, which has been most successfully achieved at Berkeley. No New Zealand or Danish or Norman butter could have looked more uniform and appetising than the half-pounds which I saw on the afternoon I was there. And they are untouched by a human hand, from the

turning in of the milk to the automatic cutting and weighing of the butter. Then the farmers ought to have the benefit of the skim-milk and other by-products. In the Vale of Berkeley, it may be added, that their holdings are not very large, averaging 150 acres or so. Anyone cultivating a very large area does not really need to co-operate. He can start his butter factory and form his own markets, keeping stock for the consumption of his own waste products.

THE CO-OPERATIVE MILL.

On Lord Fitzhardinge's estate there is an interesting and practical testimony to the value of co-operation in the shape of a mill managed on these principles. It stands on a tidal stream, the Pill, and has a great wheel, which, sparkling the water up to the May sunshine, makes one think of the mill-wheels in old romance. There is also an unobtrusive steam engine, whose particular puff is lost in the continual grinding noise that goes on in a mill.

Now, some time ago the tenancy of the old mill fell vacant, and in those times a mill was more difficult to let than a farm. It was offered and advertised in vain, and it seemed at one time as though vacancy and ruin were to be its fate. At this stage someone conceived the happy idea of making it a co-operative mill, and the Berkeley Farmers' Association was formed in order to acquire and carry it on. They were lucky enough to secure a first-rate miller, and the net result of a year's trading is that they come out with a profit of £511 19*s.* 9*d.*, and were thus enabled to pay a dividend of 5 per cent. to each shareholder, and a bonus of fourpence in the pound on members' purchases.

But, satisfactory as the balance sheet is, it does not half represent the advantages of membership. What happens where there is no mill is this: The farmer sells his grain to a dealer, who expects to make a profit, and he to a miller, who intercepts a second proportion. It is ground, and travels back to the farmhouse as flour, the price heightened by what has been given to the various middlemen on the way. At Berkeley he sells his corn at the market price to a milling company of which he is one; it is ground on the premises, and when sold back to him as meal has to bear the expenses of none who were not actually engaged in its production.

Further, if there should be anything to spare in their calculations the excess comes back in the shape of a bonus, since, in the Articles of Association, it is agreed that members shall not receive more than 5 per cent. on their shares, and all other profits return to the consumer. It may easily be conceived that a notable saving is effected when the loaf used in the farmhouse is made of flour ground in the farmers' mill, and originally grown on his acres. A still further saving is effected in the feeding of stock, since the members of the Association do not confine their operations to wheat, but grind maize and bruise peas and beans for horses and cattle. One of their specialities is a very finely ground oatmeal, in which the husks are ground up with the kernel. It is not a cheap food, as the process is slow, and there is a singular loss of weight amounting to 8 lbs. or 10 lbs. in the bushel, which would be inexplicable but for the evaporation that must take place. The Association, however, does not aspire to supply the world at large; its aim is rather to make the farmer's

products available for his own use. To prevent misconception one advantage enjoyed at Berkeley ought not to be ignored. The mill stands on a tidal stream, and, when the tide is very high, the raw material can be brought right up to it on water. The Directors, when I was there, were considering a scheme for a new landing stage and store on the Pill, opposite Hamfield House, where a barge can come at all tides. They consider this will be a great advantage to the Company, inasmuch as it will enable it to get the greater quantity in by water, which will materially reduce the cost of transit.

Obviously the Sea Mills of Berkeley provide an object lesson to the farmers, showing that, where the individual is too weak to resist the adverse current, by clasping hands and uniting they may yet be able to withstand it. I think the pig—the co-operative pig—fed by Mr. Peter preaches to them with dumb eloquence. But for co-operation it would be impossible to transmute his streaky sides into that gold which is expressed by the profit figures in the accounts. The meal used in his food derives its cheapness from coming from the co-operative mill, and it is only by accident that the milk also is not co-operative. It is produced by co-operative methods, and the farmers do everything but adventure a little capital and share in the gains. The money going now into the pockets of a small Company might have gone into their own if they had taken opportunity by the forelock. This is particularly worth noting by farmers who live at a place inconvenient for doing a milk trade. In winter, while Australian butter is pouring into the market, they need not mind; they have not a great deal of milk, and what they have is

disposed of easily. But in May, June, and July there is such an overflow that they do not know what to do with it. Yet the Australian supply ceases, and the London shopkeepers begin to send to Continental sources and to Ireland. Is England not as fit to satisfy them as any other country?

To this the reader may perhaps rejoin in the old English independent way: "Very well. Let us trust, then, to private enterprise. Depend on it the farmer is a shrewd fellow; if there is an opening he will not be long in seeing it." That is a wholesome doctrine, but we may carry it too far. It is a striking fact that none of the great foreign trades in butter and eggs have thriven on private enterprise. The farmers have either, as in Ireland, been stimulated and urged by the unwearied energy of such men as Mr. Plunkett, or, as in Denmark and our Colonies, the industry has been nursed by the different Governments. In England it will be a very difficult matter to guide the stubborn, old-fashioned farmer into the new paths. He sees the state of affairs perfectly well, but the difficulty is to get him to act on his convictions. In my opinion the only way to educate him is by means of object lessons.

BUTTER MAKING.

One thing that will help dairy farming in the future is the undoubted efficiency of the persons teaching. At Berkeley last year the experiment was tried of inducing the farmers' daughters to attend the lessons of an expert brought down to teach them. In their first season they made a certain number of Stilton cheeses, which are really so good that I could scarcely believe the one I

tasted to have been made by a beginner. Yet so it was, and the circumstance is surely an omen for good. Again, the manageress of the butter factory told me she had never made a pound of butter in her life till she started at Berkeley. Yet the full sale commanded by the butter is proof, if it were needed, of the excellence of the method. Those who see and taste it will require no other testimony. Plainly, therefore, we are at last in the way of procuring most competent and skilful butter makers, and that is one great point in the battle. The young men, too, are acquiring in the Technical Schools and Agricultural Colleges the counterpart of this skill, and have an adequate idea of the cow and the chicken. On them such practical lessons in co-operation as are afforded on the estates of Lord Fitzhardinge are not likely to be wasted. In the rest of the county there are, I hear, many estates which are ready for the establishment of creameries and butter factories. But a certain amount of caution is not only excusable but desirable, for it would be absurd to risk a failure. One factory going wrong would be enough to undo the effect of many successes. The whole matter should be thought out beforehand, and the hearty support of the farmers ensured before a wall is built or a churn purchased.

PROFIT AND LOSS ACCOUNT.

It will no doubt interest some readers to see the profit and loss account of the Berkeley Farmers' Association (Limited), *i.e.*, the owners of the Sea Mills, and I therefore subjoin it:—

Twelve Months to March 31st, 1899.

	£	s.	d.		£	s.	d.
To Purchase ...	9,848	3	4	By Sales	10,936	6	6
Wages... ...	577	18	3	Stock March 1st, 1897	638	13	5
Rent, taxes, and insurance...	236	15	2	Discount received ...	59	11	5
Railway carriage	228	3	6				
Mill expenses	28	15	0				
Repairs and renewals ...	21	11	3				
Office & travelling expenses	67	14	5				
Prelim. expenses written off...	41	19	1				
Depreciation of plant, 15 p.c.	71	11	7				
Balance—profit	511	19	9				
	£11,634	11	4		£11,634	11	4

Profit balance ... ... £511 19*s.* 9*d.*

BUTTER AND CREAM.

An "old farmer" wrote :—

"My dairyman, who disposes of the products of a well-managed dividend-paying Company, charges for cream two shillings per pint, for double cream two shillings and sixpence per pint, and for the finest butter, understood to be from the same cows, one shilling and fivepence per pound. The butter from a given quantity of cream varies according to the breed of the cows and their feeding, but according to the best authorities, it may be assumed, for practical purposes, that a gallon of cream yields two and a half pounds of butter."

On these figures, my dairyman charges sixteen

shillings for a gallon of cream, and sells the butter he makes from a gallon of cream for three shillings and sixpence halfpenny. Farmers will probably object that they could not sell all their cream. But how could they expect to do so at the present prohibitive price? Reduce cream to sixpence per pint, which is equal to one shilling and sevenpence per pound for butter, and the difficulty will be how to provide a sufficient supply. In addition to an enormous increase in the private demand, consider the consumption that would be developed in tea and coffee shops if the unaccustomed luxury—cream—were substituted for milk, and this, with cream at sixpence or eightpence per pint, the prices now charged for tea and coffee could well afford. When I was leaving New York some years ago a friend kindly sent me to the steamer half a dozen pints of cream in square glass bottles with glass stoppers that screwed down on a rubber air-tight washer. Part of that cream was consumed in London in perfect condition. Now, will any enterprising dairyman arrange to supply me and a hundred neighbours with a pint of cream daily, in sealed glass bottles, at the price of eightpence per pint, equal to butter at two shillings and a penny per pound? With suitable arrangements the cost of delivery, including railway carriage, ought not to exceed a penny per pint. Selling cream instead of either milk or butter would save much of the dairyman's drudgery. The cream would be separated into bottles when the cows are milked, and sent to the railway station in the afternoon or evening in a pony cart, instead of a van-load of milk. If the separated milk could not be advantageously sold at the farm, it would, with an admixture of other suitable food, raise pigs and

poultry of the finest quality. I venture to predict that the dairyman who efficiently organizes such a business will prove a benefactor, not only to himself, but also to the public. Let me add another illustration of how other farm produce might be dealt with. Some years ago an enterprising cheesemonger in Ontario put up in neat porcelain pots a kind of cream cheese that keeps well a considerable time after the pot is opened. This cheese, I believe, is used in all the Pullman dining-cars in America, and has recently been introduced into this country. I weighed a pot the other day, and found it contained less than four ounces of cheese. The retail price is one shilling per pot—four shillings per pound of cheese! Even at this excessive price the cheese, considering its quality and keeping properties, may be economical to small consumers. My dairyman retails "whole" milk at one shilling and eightpence per gallon, and the butter it contains for sevenpence halfpenny, with only the separated and butter milk for his labour in butter-making. If the separated milk and saving in labour are valued at fourpence per gallon, cream at tenpence per pint would realise as much as milk at one shilling and eightpence per gallon.

CHAPTER VI.

Views of Co-operation.

As the success or non-success of co-operation in England must ultimately depend on the amount of public opinion in its favour, it may be useful to bring together one or two samples of the views of influential men on the ideas set forth in the preceding pages. To give them all would require another volume. *A propos* of the paper in which I set forth the aim of the inquiry, the Duke of Sutherland wrote :—

"That nothing could be better than the leading article on the subject of English agriculture, the important point being to induce the farmers to combine, and also to supply London and other big towns with all sorts of food-stuffs which now come from abroad."

THE RANGE OF CO-OPERATION.

Mr. J. P. Sheldon, Sheen, Ashbourne, in the course of a long letter, wrote :—

"In combination for mutual help and guidance, and in co-operation for production and for sale of products, more especially in respect to butter, cheese, and milk, is to be found great and winning promise for the future. The present, indeed, and the recent past are somewhat

largely indebted to the principle of co-operation in the work of dairying, to which the future belongs. With all the success attainable, co-operative creameries and cheeseries have demonstrated the elasticity with which they can adapt themselves to the varying moods and tenses of an urban milk trade, regulating to a nicety the supply to meet the demand, and so preventing a glut in the market—a glut which is commonly disastrous in respect to perishable products. For this sort of co-operation there is abundant scope, with beneficent promise of success, for the sale of milk and the scientific making of first-rate butter and cheese. And the principle may just as well be extended to the wholesale purchase of manures and feeding stuffs which the members of the Association may require. All this requires management, we know, but it will pay for management, and no sort of farming anywhere, be it individual or co-operative in some or all of its parts, will pay without management. And it is not only in respect to milk and its sub-products that the principle of mutual self-help may be usefully employed, but also to the cattle to which we are all indebted for the most beneficent fluid food in Nature. In the breeding of dairy stock there is room for great improvement in almost all dairying districts of the British Islands, apart, perhaps, from Jersey and Guernsey. Co-operative Societies could greatly improve the quality of the dairy cattle of their respective districts by purchasing, or hiring, well-bred bulls carefully selected from herds celebrated alike for milk and beef—the dual qualifications which, not antagonistic to each other, ought always to be found fairly prominent in rent-paying stock. The same thing may be done in respect to horses. There is now no scarcity of good sires in the

equine and in the bovine worlds of these Islands; but for all that it is astonishing that so great a number of inferior animals continue to be used for the reproduction of the species. Yet, again, the vexed question of bovine tuberculosis may be far more successfully dealt with by societies than by isolated individuals. This, indeed, is a question with which we shall probably have to reckon in the future in a way of which we never dreamt in the past, notwithstanding the extreme probability that much of the recent agitation was brought out to order, and on the slenderest of foundation, if, in fact, on any foundation at all. Be this as it may, it is reasonable to aver that the interests of any given dairying district can be best of all guarded and guided by societies, rather than by individuals acting independently."

Mr. W. H. Barfoot Saint, Oxendon, wrote:—

"I am glad to give you briefly my views with regard to agricultural co-operation, if by so doing I can aid your endeavour to promote the use of that principle among English farmers. I will preface my remarks by saying that there are three forms of co-operation which can be made use of in agriculture, and which have already been to some extent: (1) Co-operation for carrying on the business of farming; (2) Co-operation for purchasing artificial foods, manures, machinery, &c.; and (3) Co-operation for the sale of farm produce. The best sources I know of for information on each of these forms are the two reports of the committee appointed by the Council of the Central and Associated Chambers of Agriculture to inquire into the subject.

THE FORMS OF CO-OPERATION.

"So far as co-operation for carrying on the business of farming has been tried in England, the result has been much the same as has followed the attempts to apply co-operation to production in other industries. The reasons for non-success in all cases are much the same. Though they are many, and vary in degrees of importance, there is one supreme cause common to all—the want of one controlling head to which accrues the reward of success, and by which the consequences of non-success have to be borne. The second form of co-operation, that for the purchase of manures, &c., has been much more extensively tried. In most instances it has been successful, and in some cases eminently so. The reasons for this are palpable. The interests of all the partners are equal and independent. The object of each is to obtain the merchandise he requires as good and as cheaply as possible by taking advantage of buying in large quantities in the best markets. In such transactions no one can gain any special benefit to himself, and, consequently, no jealousies arise among the members of the society. The third form of co-operation, that having reference to sale, is a more complex and difficult problem to solve than the second, and demands far higher qualities, moral and intellectual, on the part of the co-operators. In co-operation for purchase an energetic and good business head for the Association can, and does, relieve the other members of most of the trouble and responsibility that each would himself have had in obtaining things needed, and, at the same time, he buys for them more cheaply than they could have done separately.

SALE THROUGH CO-OPERATIVE MEANS.

"Very different is it in co-operation for sale. In this form, as in the previous one, an efficient business head of the Association is necessary to find, and, if it cannot be found, to create, a market for the members' produce; but the preparation of the produce for the markets when discovered, and the arrangements required to place the articles before the customers in the most attractive forms and in convenient quantities at regular times, depend almost entirely on the individual members. They must, therefore, exercise a great amount of care and foresight, and at the same time subordinate their natural prejudices in favour of their own particular contributions to the common stock, and remove from their minds any jealousy with regard to their co-partners' contributions. It is the lack of such moral elevation that has been the greatest obstruction to successful co-operation for sale; and to reach this moral height a corresponding intellectual breadth of view is needed. It is useless to deny that these qualities are uncommon, and in the great body of agriculturists require to be developed and cultivated. In a few small and isolated instances in England, under the commanding influence of a man possessing the qualities alluded to over some of his neighbours, Co-operative Associations have been formed and carried on for some time with success. In each instance, however, that came before the Co-operative Committee to which I have referred, I think I am justified in saying, the success, and probably the life of the combination, depended on the energy and perseverance of the individual that started it.

CO-OPERATION IN IRELAND.

"In Ireland much more has been done in this way than in England, through the action of the Irish Agricultural Organization Society—a body of patriotic Irish gentlemen, with Mr. Horace Plunkett at their head, who have devoted a vast amount of time, trouble, and money to educating the Irish farmer as to the value of co-operation for both sale and purchase. Ireland, however, is a more favourable field for such a propagandum than England. The generality of the farms in Ireland, especially in the south and west, are small. What is called a large farm in the Sister Isle would be considered a small one in England; and there is as much difference in the characters and conditions of the occupiers in the two countries as in the size of the farms. Moreover, the Irish Organization Society has a most powerful auxiliary in a number of the most intelligent of the Roman Catholic priests, one of whom, the Rev. T. A. Finlay, is Vice-President of the Society. As is well known, the rural Irishman is very amenable to the advice of the priesthood, and these gentlemen have turned their influence to patriotic account by throwing it into the scale in favour of the work of the Organization Society. But in spite of all these advantages, Mr. R. A. Anderson, the Secretary of the Society, could only say: 'When one took up the matter of selling agricultural produce one found it the most difficult question possible to solve.' The labours of the gentlemen connected with the organization have met with the reward they deserved. This difficult problem is already in a fair way towards solution in Ireland, to the infinite benefit of Irish agriculture. The organization promises to do more

for the welfare of the farmer than has been accomplished by all the rent reductions of the Land Courts.

AGRICULTURAL ORGANIZATION SOCIETIES.

"It may be said that England does not want to go to Ireland to learn economic lessons. As a rule this may be so, but there is no rule without an exception, and this is an exception well worth recognising. Can a similar Agricultural Organization Society be formed in England; and, if so, will it succeed as well as in Ireland? It is, perhaps, possible to form such a Society, but without doubt it would have a much more difficult task to perform than the Irish one had. Still, if it succeeds, the reward would be proportionately greater, for the value to the State of reviving the agricultural industry of Great Britain would be immense. But without waiting for such a heroic effort as that of Mr. Plunkett and his friends, I cannot help thinking that the few small English examples brought before the Co-operation Committee justify, and should encourage, similar modest local efforts in more places. The selection of these places, and of the purposes and objects to which co-operation should be applied, would be questions of great importance. On these points valuable lessons may be learned from the annual reports of the Irish Organization Society. In them will be seen how unambitious and prudent were the Society's first experiments, and how gradual was the advance to the splendid results now realised. Another very serious question is how to start these local efforts. If such men as Mr. A. Steel, in Essex, and Mr. T. S. Mason, at Fountains, near Ripon, were plentiful, the matter would

be comparatively easy; but the fact that so few small local associations exist is evidence of the scarcity of men such as I have named. The Irish Organization sent their own agents into certain selected districts to teach the farmers how to co-operate and to organize them into societies for the purpose of co-operation. I asked Mr. Anderson whether his people had any difficulty in finding such agents. He replied that they had very great difficulty, and that the question was of the utmost importance, as on the capacity of the men depended the success or failure of the experiment.

SUGGESTION TO LANDLORDS.

"With all this evidence before us, I think it may be taken for granted that Co-operative Societies for sale will not spring up spontaneously among English farmers, and that the initiative for their formation must be taken by someone outside that body. As the persons most directly interested in the prosperity of agriculture are the landowners, they appear to be the persons who should move in the way of forming themselves into local Organization Societies, providing the teaching agent and taking some personal interest in the work of combination. According, however, to Mr. H. Plunkett's most emphatic protest, on no account must they find money for any other purpose. Any capital required should be provided by the co-operators. If such a scheme commends itself to any gentlemen, I will take the liberty of suggesting fruit-growing and dairying districts as the best for the earliest experiments, and that the areas for association at first be not too large, not more than half a dozen contiguous villages.

When the idea of association has been thoroughly digested, and the practice becomes a habit, the small areas will be easily combined into larger ones, and co-operation may be extended to the sale of other produce. I hope the suggestions in this letter, which has run to a greater length than I at first intended, may be of service."

CHAPTER VII.

Lord Northbrook and His Tenants.

THE Earl of Northbrook is so well known to be a wise and liberal landowner, that I was particularly pleased to receive an invitation to Stratton Park for the purpose of carrying out my inquiries. In one respect only was I disappointed. Lord Northbrook fully and freely discussed the situation, but he was not willing to give any deliverance of his own. He agreed with me that a more hopeful spirit was beginning to prevail, and remarked with a kind of grim satisfaction that any further change must be in the nature of an improvement, for the irrefragable reason that things could not possibly get worse. When I questioned him he turned the tables by asking, with not unkindly irony, when the price of wheat was going to rise. But he gave me hearty assistance of the most valuable kind by introducing me to his agent, Mr. Sanday, a gentleman with large experience of land in many parts of England, and by enabling me to cross-examine his tenants. The sole difficulty in dealing with the information placed at my disposal lies in selecting those general facts and principles that may be of use elsewhere, and of avoiding the numberless details which have merely a local interest. This was one of the most interesting visits I paid, and

has left one of the deepest impressions, and yet it is difficult to reduce the result to tangible form—so much of it was produced by the personal charm of the wise and kind old peer who received me at Stratton Park.

FARMING IN HAMPSHIRE.

The district, it should be stated, is one of large arable farms. Probably the most effective way to indicate the quality of the soil is by mentioning that the rent averages about 10*s.* an acre. Landowning is not, therefore, a lucrative business. If the building and repairs be done moderately well an estate is lucky if it pays its way and yields enough to meet the wages of keepers and gardeners. Fields are large and fences are bad, being for the most part made of wattle, which has to be renewed once every three years. One cannot mention fences without touching at once on the rural exodus, which in this district has assumed formidable dimensions. Wattle-making used to be an important industry in Hampshire. I remember being greatly interested in it some years ago when visiting Winterslow, the scene of Major Poore's experiment in small holdings, and the home *par excellence* of the truffle-hunter. The truffle season begins in September and ends shortly after Christmas. Those engaged in it used to buy a few acres of underwood, and during the rest of the year make wattles for sheep-folds and fences and hazel spears for thatch. They do so still, but they have almost no competitors. Underwood is most difficult to sell at any price and wattles are scarcely to be had. This is a very serious matter in a county where the Hampshire Down is the favourite sheep, it being, as

everybody knows, fed in folds. One farmer has got out of it by crossing his Hampshires so as to procure a grazing sheep, which makes little demand on labour. Another sign of the rural exodus is the disappearance of those labouring gangs which till lately perambulated Hampshire, Wilts, and parts of Gloucester in spring. The young people used to like this. There are no gangs now except those of Irishmen, who arrive early in June and stay till late autumn. But for them farm work would come to a standstill. The farmers speak highly of them, but for my part I never yet knew the morals and cleanliness of a village to be improved by the visitors from the Sister Isle. One or two local causes have helped to accentuate the movement. Close by, a railway is being built, and many hands are employed near Micheldever Station, where chalk is being excavated for use in Southampton Harbour.

THE RURAL EXODUS.

Any sort of work is preferred to farm labour. The reason for this is hard to discover. The men themselves say farm work is dull. I should imagine the dullest of all conceivable toil to be that done in town. Take, for instance, the whole regiment of clerks. Can anything be more dismal than their task? Work, in spite of all the praises bestowed on it by Carlyle and others, must always be extremely flat to the rank and file. The bricklayer and his labourer must find it so, though the master builder and the architect are no doubt interested in their operations. The farm labourer merely shares the common lot. Indeed, his work is lively and entertaining compared, for instance, with that of a man who

makes uppers in a boot factory or has charge of a machine. In this part of the country no complaint is possible in regard to the cottages. Lord Northbrook and his ancestors have built freely, and it is a custom for farmers to give a cottage rent free. When this is not done a shilling a week is charged. The building of a cottage usually costs from £200 to £250, on which one shilling a week, or £2 12*s.* a year, is certainly no extravagant return in the way of interest. The question of wages will not wholly account for the rural exodus. On every hand complaints are made that the common schools are worked on wrong lines, the truth of the matter being that they are to men what factories are to goods. They turn out a machine-made article of a uniformly poor character. A really honest endeavour is being made to fit the well-to-do middle classes for country life, but as far as the poor are concerned the reformer has virgin soil to exploit. When the frail old people end their days and leave no survivors the force of this will be more fully realised. But already agriculture is seriously crippled for lack of labour.

SOME OTHER TROUBLES.

There are other drawbacks to cultivation in Hampshire. One is that horrible pest, the wireworm. Owing most likely to the open character of the winter it appeared in incredible numbers in the spring of 1899, and no sooner did the mangold seeds sprout than they were eaten up. Some of our naturalist friends aver that the rook and various other birds revel on the wireworm, and never touch a seed or plant except when he is there. The rookeries are very full, and in May the young rooks

are beginning to fly, but they make no impression on this part of the country. Perhaps Miss Ormerod, who has done so much in the way of studying insect pests, may be able to suggest a remedy. One hopes it may not be more expensive than the new method of destroying thistles and charlock by a spray that does not injure the wheat. There is also an insect which is very destructive to seedlings. It is not too much to hope that science will not allow itself to be beaten by a miserable wire-worm. At Reading, Downton, Cambridge, or one of the other colleges, experts ought to be able to help the farmers by devising a remedy that will be moderately cheap as well as effective. Another drawback in this part of Hampshire is the scarcity of water. Evidently the short rainfall of the past few years has not been brought up to the average, and the planning of wells is a serious study for both farmer and landlord.

POULTRY AND LARGE FARMS.

While walking over the fields and looking at the crops with a farmer, who rents 1,200 acres, I with fear and trembling put forward a little suggestion. Only a few days before an owner had said to me that all this talk about dairies and poultry was but the anise and cumin of the agricultural question. Most of those who possessed large holdings scoffed at cocks and hens. Here was a farm on which large profits seemed impossible. The corn crops were poor and thin. It must be miraculous luck that would bring a good return from grain to-day. The grass had come away badly, and a great hay crop was not to be expected. Still, at his greatly reduced rent, the tenant may just be able to make both ends meet. My

suggestion was that a huge farm like this might be profitably utilised for the breeding and fattening of fowls. If portable houses were used there was no danger whatever of overcrowding. Far from doing the grass harm, the fowls are likely to improve it. To my surprise the tenant accepted this as sound advice. The reason was that on an adjacent estate one of his neighbours, situated very much as he was himself, had actually tried the keeping of fowls. Excellent results would have been obtained but for one drawback. A great number of people would have to be employed, not, indeed, at a great expense, as only part of their time would be taken up, and the work can be done by those who are engaged in other forms of farm labour, and the daughter of a labourer or a shepherd can give the requisite attention to a pen of fowls. But what the tenant has found out was that he had no check on his servants' honesty. It was so easy to make off with eggs, and he had been methodically robbed. However, this obstacle is not insurmountable, and it was satisfactory to learn that there are farmers who begin to see that chickens may be a more profitable crop than wheat on these large areas of inferior land.

THE POSSIBILITY OF CO-OPERATION.

Tenants of large holdings are not usually keen on co-operation. Each thinks himself too important to have his concerns merged in those of his neighbours, but there are enlightened exceptions, and I was fortunate enough to come on one of these among Lord Northbrook's tenants. He is a man who has travelled a good deal, and has farmed in New Zealand. He has a

thorough and practical knowledge of the methods pursued abroad. In his opinion the butter factory is a necessary institution if this country is to work its way out of its difficulties. Professor Wrightson is certainly not wrong when he says that anyone who makes a particularly fine brand of butter, and wins a certain reputation for it, is best on his own feet. Such a man commands his own customers, does a retail trade, and obtains retail prices. But if he were going to send his butter to a town market all his skill would avail him little. His butter would not suit the shopkeeper. My friend, however, was more intent on co-operation in other forms than that in connection with butter-making, which is not the industry of the district. Comparatively little milk is sent to the towns, and the quantity of butter and cheese made is insignificant. But there are other ways in which the farmers may work together, one of which is described in the succeeding chapter.

CHAPTER VIII.

Co-operative Marts.

MR. JAMES FALCONER—the farmer referred to—kindly supplied me with the following particulars of Co-operative Auction Marts in Scotland:—

"I now enclose articles of association of Scott and Graham (Limited) and the Strathmore Auction Company (Limited). The members of these Associations are almost entirely farmers, butchers, and dealers, and their headquarters and Marts are at the county town of Forfar. They are two of the most successful Auction Companies in Scotland. The former was formed in 1889, to take over the business carried on by Messrs. Scott and Graham, Auctioneers, Forfar and Dundee, and since that time the business has greatly increased. Besides their live stock sales at Forfar and Kirriemuir, they sell agricultural produce in Dundee every Tuesday. The latter Company was formed in 1892, in opposition to the former, and for some years found it rather uphill work, but about four years ago it increased its capital, and appointed new managers, with the result that it is now doing an extensive business, having marts at Forfar, Dundee, Coatbridge, Glasgow, and Kirriemuir. There are similar companies nearly all over Scotland, where

the farmers get their stock sold at much less commission than in this part of England (Hants), and receive fair interest for money invested in the companies, and having entire control of the sales is a great advantage. I was connected with some of them, and was a shareholder in one of the first Farmers' Mart Companies ever started in Scotland. I held the position of Treasurer to the Kirriemuir District Agricultural Association, which did a great deal of good by having members' manures and feeding stuffs analysed free of charge before the days of the Manures and Feeding Stuffs Act. But the greatest good of this association has been, and still is, the improvement of the breed of farm horses, a deputation of members being appointed every year to attend the annual Stallion Show at Glasgow (the home of the Clydesdales), where they have hundreds of the best sires in Britain to select from, with powers to make liberal terms for the use of the best horse they can get. We once paid £300 for the use of a horse for three months, and had no reason to regret it, as he left a large number of excellent stock, some of his foals having been sold at very high prices, and the fact that he took the Glasgow premium the following year proved that we had one of the best horses in Scotland. Anyone visiting the summer shows or winter ploughing matches in Forfarshire cannot but be struck with the fine display of cart horses, the farmers there being well aware that nothing pays better to breed in these days of cheap corn than a good cart horse suitable for town work. They have kept their value all through the depression, and never were dearer than at present. A good horse can be reared at the same expense as a 'weed,' though

they may cost a little more to get. I believe the English cart horses could be greatly improved by crossing the Shire mares with big upstanding Clydesdale horses. Until something is done for the introduction of better sires I fear horse-breeding will not be looked on as a very profitable department of farming in the South of England."

CO-OPERATION AMONG SMALL FARMERS.

The following pertinent remarks, submitted in a letter signed Maurice Levirton, form a supplement to Mr. Falconer's views :—

"My experience is certainly rather limited, consisting, as it does, of personal observation on two or three farms in the home counties. The farmers, I know, take in lodgers, a practice more largely extending and beneficial both to the farmers and to the lodgers from a pecuniary point of view. Socially, the advent of any stranger is interesting in outlying districts. I quite agree that farmers, as a general rule, know their business practically, but their theory is somewhat deficient. As put in one of the letters, their work is done by 'rule of thumb.' They owe this defect to the inadequate provision for middle-class education, which, in the case of farmers' sons, should certainly be technical. However, this detail is now soon likely to be remedied, and, therefore, we can pass on. As regards the milk supply in the home counties, it will be found that small farmers of thirty to fifty, or seventy acres, are anxious to forward their milk to London, no doubt earning a small profit, which could be much increased if they acted in co-operation. The method of this co-operation is too well known

to need explanation. The first thing to overcome is jealousy and friction between the farmers, but the more intelligent and influential could surely form themselves into a committee for each village or district, for the purpose of combining to collect milk, forward it, and distribute it at best price both in their own neighbouring towns and in London by rail. The late Lord Winchilsea saw this in general for farm produce, but his association is thought not to be successful because practical and working farmers have not had the management. What can be done in the distribution of milk can be done for vegetables, eggs, fruit, bacon, &c. Co-operation is a remedy against foreign competition, but the English farmer, entering into such co-operation, must submit to follow the more advanced principles of farming, and not waste his time at the market town. He cannot compete with the Danish, French, or Jersey farmer and labourer unless he works as hard and continuously as they do. This exhaustive work is certainly open to question, but the conditions of farming should give a larger interest to both farmer and labourer to induce them to put all their energies in the business. No doubt the larger proportion of farmers despise theorists and theories, and would not listen to a Disraeli or a Gladstone on farming, though if they did so they might learn. Possibly, however, there are a few farmers more intelligent than the mass of their fellows, and to these I would point out that the history of agriculture in this country, and the customs and laws affecting the same are worth studying, always remembering, as regards legislation, that agitation is more effective than the legislation that follows. If anything is to be done for agriculture, the farmers and the labourers must do it for themselves in combination. A more noble

and interesting occupation cannot be found. What is required is to adapt its practice to modern requirements and to make life worth living in the village and farm. I fully believe the only remedy for the depopulation of the villages is to make life there more attractive, and this can be done in villages of over three hundred inhabitants, or combined villages at a slightly increased taxation by enforcing the Parish Councils Acts. In the long run it will pay both landowner and farmer to do this voluntarily. They can be compelled under the Acts if the village population will combine for the purpose."

CHAPTER IX.

The Vale of Avon.

It was a short time before the late Sir Edward Hulse's death that I visited his beautiful place at Breamore, on the Avon, and it was not possible to see him, but his son told me how much, even when past his ninety-first year, his father still was interested in all things pertaining to agriculture. Sir Edward's estate agent, and all to whom I spoke, bore testimony to his qualities, not only as a landlord, but as a friend on whom they depended. Indeed, all the circumstances pointed to his having been a landowner of the best old-fashioned type, who was expert in rustic pursuits, and who loved to keep old tenants and old servants round him. Mr. Edward Stanford is the manager of the estate, and his father grew old and died in the same position. Sir Edward Hulse had long passed the allotted span of life, he had beheld his sons grow up, he retained his faculties and interests to the end, and he was troubled with no long or painful illness. He had, therefore, in every sense lived his life. I cannot but think that the prosperity seen all round was largely due to him.

A fact worth noting in regard to the present state of agriculture is that while, as a rule, depression weighs as

heavily as ever on the poor and high-lying soils, it is disappearing from the valleys. We have already seen that agriculture is reviving in the beautiful vales of the Wye and the Severn. It is likewise reviving in the Vale of Avon. Breamore, it need hardly be said, is a delightful place to look at, the clear Avon making its way through meadows of the most refreshing green, while the surrounding landscape is one of undulating tilth and woodland, an excellent country for game. Close by is land of poorer quality, and one who owns many thousand acres in an adjoining parish tells me that his tenants are in as bad a position just now as they were in the most acute period of depression. To go a little further afield, so high an authority as Sir John Dorington finds very little ground for hope in regard to the Cotswolds, whereon his property is situated.

The following letter which he addressed to me brings us the contrast between hill and vale :—

SIR JOHN DORINGTON'S OPINION.

"I don't think there is at present much to be done with agriculture. Except the clever dealers, no farmers are making money. They get along, and that is all. Rents cannot come down in the poorer districts much more than they are at present without the land falling out of cultivation altogether, because it does not pay the landlord to maintain his farm in tenantable condition by executing the necessary repairs to buildings and fences. Fences which it is the duty of the tenant to maintain have deteriorated very much of late, because the tenant has economised on them, and this in time throws fresh expenditure on the landlord. I do not think this aspect of

the rent question is in general understood or taken into account at all. The profit on the land requires to be increased; the problem is how to do it. Co-operation in farming in theory would do a great deal, but practically at present it cannot be worked, even in the butter industry. The farmers do not see their way to trusting one another. Small farms where the farmer is not dependent on hired labour, or only to a very trifling degree, do pretty well. But as soon as farms run up to three hundred acres and over, great difficulties seem to arise, and it is not easy to find tenants. The class of farmer is changing, and of necessity only able, energetic men can prosper. I wish I could find a solution. Poultry-keeping, I find, is largely on the increase."

This interesting, if not very cheerful, view is substantially that of another well-known Cotswold owner, Mr. H. J. Elwes, an account of whose estate will be found elsewhere. My reason for bringing it in here will be apparent presently. It will be seen that Mr. Elwes attributed much of the depression in his neighbourhood to a change in the taste for mutton. The Cotswold sheep has gone entirely out of favour. Its wool is too coarse, its limbs too large, and its meat too fat. But Sir Edward Hulse owned at Breamore a flock of the sheep that seem to be coming most into fashion now.

THE HAMPSHIRE DOWNS.

The value of specialism in agriculture has not yet been fully appreciated. Any farmer will do well if he can make a name for producing something that is best of its kind. I do not mean that it is necessary for him to be a prize-winner at shows. On the contrary, as

Lord Northbrook acutely remarked to me, showyard successes often spell ruin. They distract the attention of the farmer from his humdrum work, they lead to a lot of visiting and dining out, and are a cause of increased expense. But this does not affect the truth of the general proposition. Whoever can produce something of distinguished excellence is sure of a market, and there can be little doubt that the Hampshire Down is a sheep well calculated to suit present requirements. Its points are exactly the opposite of those we look for in Cotswolds. Firstly, the wool, with the exception of merino, is the finest grown. Secondly, the sheep comes very early to maturity. At four months old good lambs weigh as much as 70 lbs., and Sir Edward Hulse's wether that took first prize at Wilton in 1898 weighed 120 lbs. at the age of sixteen months. January is the lambing season, so that it is easy to obtain the high Easter prices for mutton, and this same mutton is exactly suited to the present taste, being neither too fat nor too lean, and cutting up into small joints. Butchers declare that they have the greatest difficulty in selling large legs now. Even their poorest customers object to cold meat more than once a week. Of course, the Hampshire Down requires more looking after than a grazing sheep, as it is not allowed to roam at large, but is fed in confined spaces. Making wattles for the purpose used to be quite an industry in Hampshire, but, like other rural callings, it has long ceased to attract countrymen, and nets are more commonly employed. The extent to which the Hampshire Down is spreading is the best proof of popularity. When I was a youth no such sheep was known away from Hampshire. Now the Essex farmer has taken to it, and even in the North it is not

unusual to see a flock penned in the corner of a field. The Breamore flock is one of the oldest in the country, having been established between 1830 and 1840; but at first it is probable the strain was not pure, since the date is given in the Flock Book as 1852, when a number of ewes were purchased from Major Heathcote. The offspring have consistently taken prizes every year for the last thirty years, and those that were shown me, as they munched the long grass in their enclosure, certainly did not look as if they meant to allow the reputation of the flock to suffer. No one could wish to see a finer lot of lambs.

THE DAIRY.

But the sheep are not the only object of interest in Breamore. What took me there principally, in fact, was a desire to see the dairy. It is in a sense co-operative, though it would be technically described as a limited liability Company. The capital is £5,000, of which £4,000 is paid up. Most of the shareholders are farmers, and that is where the co-operation comes in. It is a very convenient arrangement for them, as they need only deliver their milk at the dairy, situated close to the station, and thus escape the worry, trouble, and loss involved in dealing with town milk-sellers. About forty-five farmers send in approximately 2,700 gallons of milk daily, for which, when I was there, they were being paid at the rate of 5*d.* a gallon. Most of this is sent to town at a cost of about 1*d.* per gallon for carriage, and what is not required for that purpose is turned into cheese, for which the Vale has a reputation, though if 5*d.* a gallon be paid for milk cheese-making is not

profitable. It sells at about 5*d.* a pound, and 300 gallons of milk are required to make 290 lbs. of cheese. The cows employed are cross-bred, produced by mating black Knots from the Isle of Skye with Shorthorns or Jerseys. As I have described several other dairies it will not be necessary to say much of the one in hand. So far it has had a fairly prosperous career, though in 1898, a bad year for dairy work, it failed for the first time to pay a dividend, but better things are hoped for in future seasons. At all events, the Company tries to work on so small a margin of profit that they must expect to show no income in a bad year. The real benefit of the dairy goes to the farmers, who, as it were, have a market brought to their very doors. To sell milk in large quantities at 5*d.* a gallon is a trustworthy source of income for them. It would appear, too, that the reputation of the Avon cheddars is growing apace, since orders come in faster than they can be fulfilled, and some of the customers insist on having the cheese away before it is ripe. One would think that at times when there is a flush of milk the farmers might take up this industry on their own account. At any rate, when there is a glut of milk in London it would be better for them were the overplus converted into cheese. Considering the tremendous competition just now, it is obvious that if some of the dairies do not take to producing butter and cheese, the price of milk will soon drop to a level that will be unremunerative. Now is the time to take prudent precautions against it. Delay will only mean shutting the stable door after the horse is stolen.

THE WATER-MEADOWS.

A third interesting feature in the agriculture of Breamore is the system of irrigation. The Avon, if left to itself, would meander at this place through broad green "haughs," as they call them in the North. But it is probable that some kind of irrigation has been carried on there from time immemorial, even though the present system dates back only a couple of centuries or so. In Doomsday Book mention is made of a mill where a mill stands yet, and it may well be that the neighbouring monks discovered how to utilise the water, or quite as likely that before their time the Romans did so. Both understood the cultivation of the soil, and showed their customary love of fine scenery by forming settlements in this fair valley. At present the flow of water is adjusted by what looks to a stranger a most intricate mechanism of cross currents, hatches, and aqueducts—one stream being made to run with great ingenuity under or over others. It is all carefully regulated, so that each owner knows exactly when his little dykes and drains will be flooded, and moves his live stock accordingly. There are many other water meadows in Wiltshire, but none, as far as I know, exactly like this. It yields a splendid growth of grass, and, generally speaking, gives the occupier an advantage in droughty seasons. So great is the maze of waters that one is sometimes puzzled to distinguish which is the original stream. The Avon may be held to explain the comparative prosperity of the district. Not only does it yield grass that makes milk-producing a natural occupation to the large occupiers, but it is taken advantage of by the poorer classes for the purpose of breeding ducks and geese—an

industry capable of much greater expansion. Every encouragement should be given the cottagers to obtain the best breeds, and get them on the market at the most profitable season. Those who possess cows enjoy a still greater advantage, it being an old custom to let a certain amount of grazing on the marsh go with the letting of certain cottages. Whether this is technically a right of common or only a private arrangement with the owner I did not ascertain.

THE LABOUR QUESTION.

In spite of all this the labour question is, perhaps, more acute in Wiltshire than anywhere else. Not on one estate only, but everywhere the same tale is told. Most of the young men go away, and those who remain take no pride in learning the arts wherein their forefathers were proficient. Reference has been made to the scarcity of wattle makers, but it is the same with other callings. Anyone desirous of meeting a farm hand who is expert at thatching or ditching, at hedging or stacking, is likely to have a fruitless quest. Complaints even are made that if the youths were willing to learn there is none left to teach them. So long has the movement endured that the old generation is dying out. That, indeed, is the one fatal obstacle to a speedy revival of agriculture. The industry can only recover itself by reducing expenses of all kinds to a minimum. If it were carried out on purely commercial lines, there is not as much profit as a business man for one moment would consider warranty for an increase of wages. On the other hand, it would be most unreasonable to expect a workman not to better himself when he has the chance,

and as long as commerce is flourishing in towns the exodus must continue. But one does not like to contemplate what would happen if a period of dull times were to set in. The problem of the unemployed would then arise in a more formidable shape than ever.

CHAPTER X.

Farming on the Cotswolds.

WHOEVER knows the Cotswold farmer knows a man who is not easily beaten. The hills, the east wind, and a love of sport have combined to make as tough and plucky and jovial a race of farmers as is to be found in Great Britain. I think they have had to fight against worse odds than any other body of farmers, unless it be those in East Anglia. The chief supports of their labour have been destroyed, and nothing has been found to replace them. Wheat was grown, far too much of it, in the palmy days. Many of those high hills should have remained in permanent pasture instead of bearing the plough, the furrows still attesting how once it was arable. Then a very great change has come over the popular taste for mutton. The Cotswold sheep is no longer in repute. He grows too big, coarse, and fat to suit the modern appetite. His wool is too rough for a generation of which all but the poorest can boast of merino underwear. So even those who used to carry off all the prizes and reckoned on turning over a large sum annually from the sale of pedigree rams are disheartened. They have to look to other means of earning a livelihood. Nor is the country suitable for dairy work. Of course, it is quite practicable to keep a few cows, but there is

not food enough for any large number in the bleak upland pasture. Little, indeed, is to be hoped from the establishment of butter factories and creameries here. In this particular district agriculture has gone from bad to worse. More land is in hand now than there was at the worst period of depression. One hears continuously of this and the other tenant having come, lost his all, and failed since I went over the ground about eight years ago. If the landowners had no means except what they derive from the soil it would be impossible for them to go on at all. Yet people are not sitting down in despair to wait ruin with folded arms. They are making a fight, and some account of their failures and successes may be interesting.

THE CO-OPERATIVE FARM.

When I was here before much attention was being directed to the co-operative farm purchased and set agoing by the late Mr. Holloway, at that time, I think, Member of Parliament for the Stroud Division. He was a keen, shrewd, hard-headed man of business, set on doing good on a commercial basis. Not that I think the merchant's desk a good preparation for managing property. Land has traditions quite different from those associated with trade, and unless a man trained to commerce is content to efface himself and leave the management to those who understand it, a retired manufacturer hardly, if ever makes a really good landlord. Mr. Holloway was not retired. His health was breaking up, but I remember to have carried away from our conversation an impression that his brain was boiling over with plans and ideas, some relating to his proper business,

some to his well-known benefit scheme, some to politics, and some to land. But no human mind could really master so many subjects, and after a year or two the co-operative farm went under. The holding bore the curious name of Trafalgar, given because the news of that battle arrived as the masons were building the house. The period implied that the tenant could look forward to selling his wheat at 100*s.* the quarter, and so he "rived and rembled" those delightful uplands, then, as now, famous beyond all else for their delicious wild strawberries. But when Mr. Holloway entered on his holding the prospect for wheat was that it would soon be at 20*s.* a quarter. It is scarcely worth while to recall the particulars of his scheme. The central idea was that the profits of the labourers should go to the gradual purchase by them of the holding. In more prosperous times it might have succeeded. There was great rejoicing the first year when a profit was shown, but when the balance went the other side, and persistently remained there, despair set in and the enterprise had to stop. It thus met the common fate of profit-sharing farms. Even Lord Grey's, at Wark, has not been very flourishing of late, I understand, and in no case has one been brilliantly successful.

DECAY OF POPULATION.

The population of the villages is shrinking away. Down in the rich vales there is room for some difference of opinion, and during the last three years, at least, some farmers have done very well indeed. But if prosperity were to return there is no longer labour enough to do the work of the farmer. Peasants enjoy a hale old age

on the Cotswolds, but when they pass away who is going to fill their places? It would be difficult to answer the question. In the Cotswolds it is impossible to let excellent cottages for the modest sum of one shilling a week. Several that were built by the father of Mr. Elwes—good comfortable structures—are in part empty, and in part let to people in Cheltenham or Cirencester who prize the gardens and like to have a place to go to at week-ends. Indeed, I have often wondered that more London people do not take advantage of similar opportunities. The very same state of things prevails in Essex and Hertfordshire, where anybody who is content with a cottage, not a showy villa, may have one for a nominal sum. To live regularly from Saturday to Monday in the country for eight or nine months of the year would certainly more than repay in health the outlay in railway fares.

FARMING FOR GAME.

It is somewhat difficult to decide what should be done with the land situated where wheat growing is not profitable, where the pastures are not rich enough for dairies, and where sheep do not yield a profit. Mr. Elwes, as is well known, has for many years relied largely on rabbits. Land is not sought after for many things now, but it is still in demand for shooting. Perhaps it is in some degree due to the great commercial prosperity of the country that the upper middle classes have developed so many keen sportsmen. There is a marked competition for shooting among prosperous professional men and tradespeople who have succeeded in amassing fortunes. Where there is an agricultural tenant perhaps this does

not come to much. He has an indefeasible right to the ground game, and usually a frank dislike of the shooting tenant. But for land in hand Mr. Elwes experiences no difficulty whatever in obtaining 6*s.* an acre merely for the sporting rights. On the Cotswolds agricultural rent averages about 7*s.* an acre, and, of course, involves a certain amount of expenditure for repairs and so on. Thus the sporting tenant is by far the more profitable. He does not require sixpence to be expended on him. The grazing and cultivation can be made to show a return if no capital is laid out, and thus the sporting rent becomes a solid income. One cannot avoid a feeling of regret at seeing land capable of producing excellent food-stuffs abandoned to the partridge and the rabbit. Yet an owner is not to be blamed for doing the best he can. Besides, such letting can take place only on poor land. There are not many people who would care to give more than 6*s.* an acre for nothing but sporting privileges, and land is not very good that is not worth more for agriculture. On the other hand, the demand for good shooting seems continually on the increase, and it is maintained by those who do not care much what they spend. Shooting may, therefore, in time come to reach the fancy price given for fishing. There is a trout stream which is not forty miles from Charing Cross, and two miles of it is let at the moment of writing for £300 a year. That, of course, is a purely fanciful price, the trout in the stream, if every one were caught, not being worth a sixth part of the rent. One disadvantage of a game-farm is that the rabbits, which are the mainstay of the shooting, are very destructive, but as far as trees go the evil can be guarded against at a comparatively small outlay.

EXPERIMENT IN SMALL CULTURE.

One finds the oddest things where they are least expected, since people do not choose their path, but often have to go where they are driven. The top of the Cotswolds does not seem a promising site for an experiment in bee-keeping and poultry-farming, and yet I came across an interesting little holding devoted to this work. Two Northumbrian lads, hailing from near Morpeth, have essayed what should prove an interesting experiment. They came south with a farmer who fancied he might be able to do something with land offered at a very low rent in comparison with what he had to pay in his native county. He did not succeed, and the two young men who accompanied him were left stranded on the Cotswolds. Instead of hiring themselves out to the Gloucestershire farmers, who do not pay the wages current in the north, they took a tiny holding, including the use of some grassland, and started bee and poultry-keeping. I was very much surprised to find no fewer than 120 bar-frame hives all ranged neatly in a row. They had been obtained almost without expense. The Cotswold villager follows the old improvident method with his bees. In autumn he smokes them out when he takes the honey and buries them in his back garden. But the two canny Northumbrians went round to their neighbours and represented that they might give them the bees instead of destroying them. In this way they got a vast number of hives which they formed into strong colonies by throwing two or three together.

BEES AND POULTRY.

Next came the question of houses for the workers. The young men were richer in brain than in ready cash, and, having looked carefully into the mechanism of a bar-frame hive, found that they could make one themselves. Wood is cheap enough, and so at practically no expense they have come into an immense stock of bees. How they will do remains to be seen. It is not a very promising bee country, though arboriculture has been a favourite hobby of some landowners, and there are many lime trees. There is also a certain amount of sainfoin and white clover. But honey-bearing flowers are not plentiful; heather does not grow on these hills, and the situation is somewhat bleak and cold. The bee-master told me he was only learning the craft, and I fear that his way to success, as so often happens, will be paved with failures; but he deserves to get on, and a man of his type usually does manage to come to the top somehow. The second man is vastly more interested in his poultry, and has more chickens than he can count in coops on the hillside. Probably he will have to study the different breeds more than he has done before he makes his fortune, as his birds look rather mongrel. Yet such men who boldly venture forth on what is a new line, so far as this county is concerned, are often the pioneers of others. I hope to hear one day that the two Northumbrians have at least made a living wage by their enterprise.

FARMING IN THE VALE.

In pleasant contrast to the dismal outlook sketched

above, I subjoin a communication kindly sent me by Mr. Granville E. Lloyd-Baker, a well-known landlord in the Vale of the Severn :—

"In answering your letter I shall confine myself to the Severn Vale, between Gloucester and Berkeley. The farms are chiefly dairy, and the rents have fallen from twenty to forty per cent. At the present rent the farms let readily, and the farmers seem to make their way in spite of difficulties. Where a family has thriven, and the sons have followed their fathers in farming, I have always observed that there are good cheese-makers in that family. Though the profit on cheese is smaller than formerly, the art is quite as valuable, as it enables the farmer to utilise the summer milk at a time when the market is glutted. The winter milk he can sell at a good price. Some of your correspondents have bewailed the exodus from country to town. I think this is confined to labourers. Farmers stay on the land or emigrate. Though one regrets the diminishing number of labourers, not only because it increases the difficulty of the farmer, but because fewer strong healthy men are brought up, one must remember that we could not provide work on the land for an ever-increasing population, and the higher rate of wages and the improvement in machinery forbids our employing as many as before. The great drawback is the difficulty of milking. Unless the farmer's family take a good share of this, it is necessary to keep more hands than are otherwise wanted on the farm. This is especially the case now that arable land does not pay and has been laid down to grass. If a really satisfactory machine for this purpose could be found it would be a relief. As regards the future, I believe that further improvements will reduce the cost

of labour, and that scientific instruction will raise the quality and ensure greater uniformity of our products. Formerly a good dairywoman produced some excellent butter and cheese; but there were occasional failures. The object of science is to minimise these losses. As an example of the effect of machinery I will quote the letter of a practical agriculturist nearly seventy years ago, in which he states that if the Government allow wheat to be imported at 60*s.* instead of 64*s.* agriculture must cease, as 64*s.* had been fixed not as a profitable price but as the lowest at which it could be grown at all. Wages were then 8*s.* a week, with a few extras; they are now 13*s.* to 18*s.* with extras, and yet we could grow wheat profitably at far less than 60*s.* There has been some migration of farmers from Somerset and Devon to Gloucestershire. I believe that formerly these men had not so much money as those in Gloucestershire, and were used to a simpler life. When several Gloucestershire farms were vacant, and rents fell to a figure that was within their reach, they took them, and by hard work and economy have made them answer. These are exceptions, for most of the farmers' families have been in the neighbourhood, though not always on the same farms, for a hundred years. With regard to Government assistance, I think that the Food and Drugs Act is a step in the right direction. If adulteration of butter were made, on the third conviction, a matter of imprisonment without the option of a fine, as is the case in Denmark, and the prosecution was conducted by central, not local, authority, the butter-maker would be protected against a most unfair and crushing wrong. In the country that I have quoted, where agriculture is of supreme importance, any adulteration, even of seed or manure, is visited

with heavy, and therefore effectual, penalties. In addition, I wish that the Government would give liberal compensation in the case of animals condemned for tuberculosis. This affects the consumer, for it is only by this method that the evil can be stamped out."

CHAPTER XI.

Lord Bathurst's Flax-fields.

On and off during the last sixty years attempts have been made to arrest the gradual withdrawal of English land from flax. Indeed, this plant has excited in some an intense enthusiasm. "Vivat Linum," surrounded by a flaxen wreath, adorned the cover of the book John Warnes wrote about it, and published in 1846. At that time a certain amount of flax was still almost necessary, and I know two or three country women of advanced age who have carefully laid away the "providing" spun by themselves for their marriages. Beautiful table and bed linen it is, and for the most part fragrant with lavender. The Ailie Dinmonts and Mrs. Poysers of the early part of the century would have thought themselves shamed past speaking if they could not carry to their husbands a quantity of linen, the minimum of which had long been settled by tradition. But in 1846 the reign of beautiful hand-made stuff of all kinds was passing away and yielding to that of the cheap, uniform, machine-manufactured goods. Even then the distaff and spindle, though few cottages were without them, were ceasing to be used, and the rustic maiden was getting into the habit of purchasing her bridal gear from the town draper. John Warnes seems to have felt

that the change was inevitable. He attached most importance to adjuncts of flax cultivation—"the fattening of cattle with native produce, box feeding, and summer grazing." It is curious to note that a subsidiary ground for recommending flax cultivation was that it would afford permanent employment for "the redundant juvenile population," which has long been "the bane of society." That is at least one reason which time has abolished, but the other inducements to flax-growing remain very much what they were. Like the enthusiasts of to-day, Mr. Warnes publishes letters from farmers in various parts of the country, these communications being intended to show that flax has realised per acre more than any other crop. The sum varies a good deal, ranging as it does from twenty shillings to as many pounds. From "the debt and credit of one acre," Mr. Warnes appears to have thought that ten guineas was a reasonable profit. Even in the palmy days of wheat that was worth struggling for.

SOME RECENT EXPERIMENTS.

Our interest in all this arises from the fact that what Mr. Warnes was doing half a century ago is being done again to-day by other enthusiasts. Mr. T. L. Henly, for instance, has for many years past devoted himself almost exclusively to the propagation of the flax cult. "An acre of fair average flax," he says, "should yield somewhat as follows; but, of course, this will vary according to the season. A wet summer which half ruins a wheat crop is just what flax delights in." If his methods be followed, he gives the following as a probable result:—

	£	s.	d.
Twenty bushels of linseed, worth 6s. a bushel	6	0	0
Seed capsules, equal to ordinary hay	1	0	0
Share of proceeds from fibre, say ...	3	0	0
Total ...	£10	0	0

As Mr. Henly estimates the cost of cultivation at £5 an acre, and we may add 30s. for rent, a very satisfactory margin of profit is left—on paper. In the prospectus of the English Fibres Company it is stated that flax grown experimentally in Cambridgeshire yielded to the farmer a net profit of £3 an acre. When agricultural depression was at its worst these alluring figures took the fancy of many leading agriculturists. Among others the late Earl of Winchilsea became a devoted believer in flax; the Duke of Portland determined to try it in different parts of the Welbeck neighbourhood, and Earl Bathurst decided to give it a fair trial in Gloucestershire.

OBSTACLES TO FLAX CULTIVATION.

In looking over many eulogies pronounced by the individuals, Societies, and Companies devoted to flax cultivation, one is struck by the fact that the alleged profit is frequently a matter of estimate, and that where that is not the case the results have invariably been achieved on an experimental plot. For that very reason they are, to some extent, fallacious. It has repeatedly been shown that what is done on a small scale cannot always be accomplished on a large one. At any rate, the following figures, extracted from

Major Craigie's agricultural report for 1898, form a chilling comment on some of the more sanguine calculations. They show the extent of land under cultivation for flax in the United Kingdom during the last three years :—

	Acres under Flax.
1896	... 74,098
1897	... 46,995
1898	... 35,391

But statistics give one only the dry bones, and it was for the purpose of ascertaining the individual experience which makes the dry bones live, that I journeyed as far as Cirencester in order to ascertain by inquiry on the spot what obstacles stood in the way of English agriculturists who were willing to cultivate flax. "Cissister" is the sort of place where one expects to meet with experiments in farming. It is a purely agricultural little town, and no factory smoke mingles with its pure Cotswold air. The place, too, has long agricultural traditions. From the time of Shakespeare to that of "Hodge and his Master" it was a kind of sheep metropolis for the south-west. It possesses an Agricultural College, and the Bathurst family has in this district ever been distinguished for the encouragement of rural industry. It was quite in accordance with the spirit animating his house that some years ago Earl Bathurst set about practical measures for ascertaining what scope agriculture had in flax. Probably it is still too early to form a final judgment on the result. The difficulties have been met rather than surmounted, and one can at present only enumerate them.

THE GROWING OF THE PLANT.

First, then, the growing of the plant is simple enough, and farmers, if they could find a sale for it in the raw state, would produce the article readily. There are certainly a few points on which a difference of opinion exists. It is, for instance, absolutely necessary that this crop should be kept clear of weeds, and, if it be sown in drills, that is easy enough of accomplishment. But the best return is produced by sowing broadcast, and in that case the weeding has to be done by hand. The old writers were very particular with regard to this, and directed that in order not to crush or bruise the plant, the weeding should be performed barefoot. In Belgium it is done by women and children with cloths round their knees, creeping on all fours. The old authorities also insisted that flax should not be reaped but pulled, while the modern expert is all for cutting. Old scribes knew little or nothing of the great problem that confronts the modern agriculturist—how best to utilise machinery and save labour. Their greatest concern was, as I have said, to find work for that "redundant juvenile population" which has been so greatly reduced. The Cotswold country, it may be noted by the way, is not highly suited by nature for growing flax. It is too high and dry. The best results have been achieved in the low, cool, wet fen country of Cambridge and Lincoln. But now comes a still greater difficulty, that of preparing the fibre for market. The scene of Lord Bathurst's operations is North Cerney—a wayside village about four miles from Cirencester on the road to Cheltenham. Here stands one of those picturesque old water-mills which adorn so many estates and

remind one of the time when each farmer sent his corn to be ground, the miller took his multure, and the "poker" carried round the meal. But many of the great wheels have gone to ruin, and others are diverted to purposes never contemplated by the original builder.

THRASHING THE FLAX.

Lord Bathurst uses the old water-mill for thrashing his flax. The people were busy at the task when I was at North Cerney, and a dusty and laborious business it looked in the hot sunlight. If an ordinary machine were employed the fibre would be spoiled. Two wooden cylinders are therefore set rolling in opposite directions, while the flax—a handful at a time—is thrust between them and the seed is beaten out. The device is not satisfactory, as it leaves in too much of the seed, and this the farmers do not like, for when they sell the flax the return of the linseed is part of the bargain. Of its immense value for feeding purposes there is no room for doubt. A common complaint is that flax exhausts the soil, but this does not accord with modern scientific opinion. The flax plant, in the words of the expert, is "a material consisting entirely of atmospheric constituents—the inorganic substances taken up by the plant are only tools used in its construction." To separate the fibre from the husk is even more difficult than getting the seed out of the straw. Lord Bathurst, who felt that after encouraging his tenants to grow flax he was under a kind of moral obligation to see it disposed of, has built a "retting" tank on the other side of the road to that on which the mill stands, and a little further down. This is a huge

vat with a heating apparatus. Into it the flax is put after it is dried and won, and in order to hasten the process of fermentation the water is heated to a temperature of about 90 degrees. When the woody part can be easily pulled off the flax is sufficiently "retted," and must then be taken out of the vat and exposed for six or eight days to dry. When the stems will bow through contraction of the fibre it is ready for the scutch mills. Then comes the most arduous business of all, that of separating the useless husk from the valuable fibre. This has not so far been successfully achieved at North Cerney, and when I was there the loft of the mill was filled with the uncleaned fibre of several seasons. Lord Bathurst thinks, however, of purchasing a machine and working it off. Of course, in all these operations it must be remembered that he has only been feeling his way. His agent and those under him have hitherto been engaged exclusively in the ordinary forms of agriculture, such as growing corn and feeding stock. It takes time and experience to pick up the best ways of dealing with flax. The most ominous feature of the general situation is that the results of flax-growing have been discouraging, and that the tendency is to give up its cultivation.

FLAX FROM RUSSIA.

Theoretically it ought to be a very remunerative crop. Russia at present practically supplies the English market; but there seems to be no doubt that, though, owing to the cheapness of labour and other causes, the Russians can produce it at less cost, the quality is inferior. No country in the world is more capable of producing the best flax than England. What we lack most is

machinery. Labour is very scarce in the Cotswolds, and no farmer will take up a crop that requires much to be done by hand. It does not seem either that the demand for flax is on the increase. The quantity, dressed and undressed, which we receive from abroad is almost stationary. It amounted to 91,000 tons in 1888, and 97,000 tons in 1898; while in 1894 it fell to 71,000 tons, and the next year it rose to 102,000 tons—the average over a period of eleven years being 89,000 tons, worth, say, about £3,000,000. To a considerable extent cotton-seed appears to be taking the place of linseed. On the other hand, some curious markets have arisen for the coarser fibre. Much of it, for instance, is employed in the manufacture of leather board, a paper compound in considerable demand by those who supply the British public with the least costly boots and shoes. There is also a growing demand for flax suitable to the production of twine and rough cord for sheep-nets and so on. In paper-making the race for cheapness is so keen that makers cannot afford to use as much flax as formerly. Again, linen is not nearly so much used for men's shirts as was the case in times past. The cheap white shirt is nearly all cotton and woollen, while silk fabrics are utilised to a growing extent in the manufacture of shirts for the well-to-do. An increasing quantity of "linen" is made of xylonite.

The case for and against flax growing as a profitable agricultural pursuit will now be fairly apparent. Despite the many failures and discouragement that have attended it, and the quantity of land that, after having been devoted to this purpose, has been withdrawn from it, an impression remains that there is more in it than appears. The reason that farmers gave up flax-growing was that

they had to do their own retting and scutching. Lord Bathurst, as far as his own tenants are concerned, has relieved them from that. If he can work his new machinery with success, he will not only have benefited his own people, but have done something of the greatest service to farmers in all parts of England.

THE QUESTION OF MACHINERY.

Mr. T. L. Henly, the well-known expert, asks me to add the following remarks:—

"You have given a brief and somewhat general view of the question as to whether the cultivation of flax can be successfully carried on by English farmers, without interfering too much with other farm operations at a time when the cares of harvesting press heavily upon their attention.

"I now propose describing, so far as I am able, the different methods adopted in various parts of the United Kingdom for dealing with the growth and subsequent manipulation of flax, in the treatment of which Ireland leads the van; this industry being carried on almost entirely in the north of Ireland, although successful attempts in the same direction have, I am told, been recently made in the south of Ireland also.

By the Irish system the flax has to be pulled before the seed is ripe (thereby sacrificing the latter), and placed in the steeping-pit immediately, which must either be filled with water beforehand, or else this must be supplied directly afterwards, otherwise the fibre will be ruined. An acre of fair average flax in the green state would weigh fully three tons, and would require a

steeping-pit some 30 feet long, 8 feet wide, and 5 feet deep, and this must hold water like a cup. Multiply this by ten only, and the impossibility of English farmers undertaking such work in the midst of harvest will be apparent to all.

"In some parts of England, notably in Somersetshire, the practice of dew-retting is adopted, and I have seen excellent specimens of fibre produced thereby; but here again the difficulty in regard to want of space comes in, for in order to dew-ret, the flax straw must be spread evenly and thinly on the grass, and be turned every few days until the dews and rain have done their work; but the difficulty of treating large quantities after this manner would be very great, and I do not think the practice is at all likely to become general.

"So far, then, the prospect of flax-growing being made beneficial to English farmers is by no means encouraging, and if no other system of treatment were available, the less they have to do with it the better perhaps, although the foreigner evidently finds it profitable to grow flax for the seed only, or he would not continue doing so; but there is another system of converting the straw into fibre, which is both simple and practical, viz., that adopted by Earl Bathurst at North Cerney, and although I have no intention at this moment of asking his lordship to produce his balance-sheet in proof of the truth of this assertion, seeing that, as stated in your account, he has been 'feeling his way' without any previous knowledge of the business, yet I am assured by those who have tried it that flax straw cut with the scythe or reaper when the seed is ripe, provided the latter has been taken off without breaking the straw, is worth at least £2 per ton, and can be converted into

saleable fibre at reasonable cost with ordinary farm labour, and leave a perfectly satisfactory profit on the transaction ; but this I consider is no part of an English farmer's business, any more than those of brewing and bread-making.

"If, then, the Flax-Industry is to be revived for the benefit of English agriculture, the landlords must follow Earl Bathurst's example (but carefully avoid his mistakes), and erect the necessary machinery for converting the straw into fibre, the total cost of which, power included, sufficient for treating the produce of 250 acres yearly, will not, I am assured, exceed £500, and will last a long lifetime if properly taken care of.

"It would occupy too much space were I to enter here into detail as to how this is to be accomplished, but if any landowner who may read this would like to give it a trial, and will send me his address through the mediumship of the publishers, I will furnish him with full particulars and help him all I can.

"In conclusion, I may say that the business requires no skilled labour, and can be carried on almost entirely in the winter season if desired, but would of course require skilled supervision for a time, and this can be obtained without any difficulty whatever."

CHAPTER XII.

Farming in Northumberland.

As I spent the greater part of a month in Northumberland in 1899, and have been in constant intercourse with all sorts and conditions of people connected with husbandry, from hinds up to landlords, I am able to write with confidence on the subject of farming in that locality—all the more so because I have known the district since childhood. It is interesting from several points of view, which it may be well to treat *seriatim*. There is, firstly, far more prosperity than prevailed some years ago, and it is a prosperity of which there is tangible proof, but there is one class which does not appear to have much share in it.

THE GENTLEMAN FARMER.

In old times farming in Northumberland was carried on very largely by men of means and education. The occupation had many attractions for them. It was an open-air pursuit, and furnished abundant opportunities for gratifying that love of sport which appears to be a constituent of north country blood. A gentleman farmer expected to be able to keep a horse fit to follow the hounds when they met near his steading. The shrewder

sort, indeed, combined business aptitude with a taste for fox-hunting. Often the tenant farmer appeared in the morning on a mount of his own breeding—and one may be sure its beauty was not marred by bad riding or lack of grooming—and at night he came home minus the horse, but with a cheque in his pocket. Northumberland is also a coursing and otter-hunting county—sports that can be enjoyed on foot as well as in the saddle. Some shooting was likewise to be had, and altogether the life bore a close resemblance in its pleasanter features to that of a country gentleman. The gentleman farmer goes to market in a smart turn-out, his children are sent to the best schools, and he prides himself on his wine and cigars. This individual is groaning. He vows that depression never before was so bad as at the present moment. It is with the greatest difficulty, and only by having occasional recourse to his capital, that he can keep things going. But the reason is plain. The day of large profits is past, and land will not bear the expenses he would cast on it. He does not actually labour himself, but hires a bailiff or steward; his daughters, even if they develop a fashionable interest in cows and chickens, are too refined for rough work. So is it with his sons; the majority of them grow up with a dislike for agricultural pursuits, and the others are above hard work. But farming under present conditions cannot be carried on profitably in this way. There is no doubt about the fact that gentlemen farmers are in greater tribulation than they ever were before. Unless they are prepared to lose an annual sum for the privilege of living in the country, and following this agreeable occupation, they are entirely out of place. When it is said that

Northumberland is prosperous it is with the reservation that they are excepted.

THE SELF-MADE MAN.

There is a very opposite type of farmer who is doing extremely well. Probably there is no other county in England where so many rich tenants have sprung from the plough-tail. Even in those years of awful depression I could point to several men, all living within a comparatively small area, who have worked themselves up to a good position. Let one speak for all. A——, who might possibly not like to have his name published—in the early eighties was an ordinary farm servant, with a large family of sons and daughters. As these grew up they, both male and female, went out to work in the fields for the comparatively large wages given in the North. A hind with, say, four sons and four daughters, no uncommon family, had a really considerable sum coming in when they were all at work—say, between three and four hundred pounds a year. The father and four sons alone, earning the ordinary wages a pound a week, would make £250, and four women little less than half as much. When they clubbed together a very great deal of this could be, as they say, "put by." What with the garden, pigs, cows, and one thing and another, food cost almost nothing. Clothes were cheap and rent nominal. I do not know exactly what family A—— had, but in due time he took a little farm, and in a few years a bigger one, and again a still larger one, till in 1899 he was established in a capital holding of 900 acres. He is prospering and likely to prosper, for reasons that lie on the surface. Firstly, he manages his own affairs,

and thus saves a solid £50 a year, the least a gentleman would pay for a steward. Next, his family have no false pride. They still do a part of the hinding, and this means more than a saving of wages. On a farm it is not possible to have an overseer for every two or three men working in a field, and if they have any disposition to loiter there is no check on them. But should a son of the master be among the number, that fact has a far better effect than the attendance of any paid steward or overseer. It is the same with the women. In them the farmer has the most devoted servants, because their own interests are involved. Nominally he takes the farm, but really it belongs to the family, and the women know that they are working for themselves as well as for the farmer. Nor are these the only indirect savings. The amateur farmer feels himself bound not only to attend all markets and similar gatherings, but also to do so in good style. He puts up at the best inn, has the best dinner to be procured, and probably spends from ten shillings to a sovereign each time. A—— goes only when he has business, makes no outward show, and probably thinks himself robbed if his expenses come to more than half-a-crown. These are only illustrations of a difference in the style of doing things which may be observed throughout. When prices were high the gentleman farmer could afford to indulge in the comforts and luxuries to which he had been accustomed. Nowadays the margin of profit is too fine to admit of these extravagances. Leakage of any kind is fatal, and so the hardy, frugal man, who has sprung from the soil, and does not disdain any more than George Stephenson did in his day to make his breakfast off "crowdy," has

success on his side. The number of self-made men who keep continually on the rise to a better and still better holding affords conclusive proof that even in these lean years of depression it has been possible to make money out of land.

STYLES OF FARMING.

It may seem strange to our south country friends that this success has been achieved without recourse to what is somewhat contemptuously designated "fancy husbandry." The district I refer to—the extreme north of Northumberland—is not adapted to dairy work of any kind. No milk from it is sent to any town. I am told, indeed, that the milk trade cannot be profitably conducted more than thirty miles out of Newcastle. The local railways seem to carry no milk cans whatever. A little butter of very good quality is made for home and local consumption; no attempt is made to feed the town markets. Some years ago the County Council endeavoured by means of a travelling dairy school to stir up this branch of farming, but very little effect has been produced. It is by other means that profits are made, and the farmer like most of us travels along the line of least resistance. Nor has poultry-keeping made any very great advance. The exhortations of Mr. Brown, who is lecturer for the county, prevailed for a while, and have produced some effect in the way of inducing people to keep the better breeds of fowls, but complaint is made by those who feed chickens that they cannot find a market for them. The local towns are not large enough to absorb the supply, and organization is not so perfect that a farm shadowed by the Cheviots

can supply a club in Piccadilly, so that poultry-keeping as a serious aid to income is not in repute. What the successful farmer does is to follow the four-course system much in the way his forefathers did, and he puts his trust chiefly in sheep and fat cattle. Nor can one say even that a great advance has been made in stock-keeping. The Northumbrian farmer has not taken much to fancy sheep, such as Shropshires, Leicesters, Downs, and so on. Most of them are too early for the district, and the Cheviot improved with a cross still remains the favourite. It yields excellent mutton and fair wool, and above all appears to be naturally suited to the locality, which is also famous for its fat cattle. Of course, it is necessary for the farmer to turn over a good deal of money. Rents have come down from what they formerly were, but still 40*s.* an acre is not far from the average. Wages also are very high, and are not likely to come down as long as commercial prosperity keeps the mines of Durham and Northumberland busy. They are a continual attraction to the farm servants, and nowhere is the rural exodus more marked. The Labour question is here a most critical one, and 1899 will be remembered as revealing the danger of trusting too much to other sources. Machinery has, to a large extent, replaced the human hand, but suppose, as we have often seen before, that a series of wet bad seasons set in. Previously gangs of Irishmen used to do the work, and were regularly looked for in the hoeing and harvesting seasons. Of late, however, they have appeared in greatly diminished numbers. In the first place agriculture is much more prosperous than it used to be in Ireland, and the small holder is under no necessity to set forth to seek the harvest. In the next place self-

binders and other machines have reduced the chances of work, so that the Irish labourer is no longer sure of obtaining employment. Yet it seemed at one time as if it would happen this year, and it may occur any season, that the corn will be laid so that the reaping can be done only with the sickle. Where is the labour to come from? More than one owner and occupier has asked the question with startled eyes.

THE DUKE OF PORTLAND'S DEMONSTRATION FARM.

It is very evident that Technical Instruction to be of real value should be suited to the requirements of the locality. I cannot, for instance, see a great deal of sense in the Northumberland County Council spending large sums of money to teach dairy work if experience shows that cow-keeping is not an industry suitable to the district. Nor will any number of lectures on poultry be of much service where no large market is available for eggs and chickens. But, on the other hand, science may assist the farmer greatly in his ordinary pursuits, and the work done on Cockle Farm is of the utmost importance. The holding is situated about four miles from the little town of Morpeth, and belongs to the Duke of Portland, who, on easy terms, let it about four years ago to the County Council on a twenty-one years' lease. The County Council entered the farm on May 12th, 1896. It has an area of 402 acres lying rather high; the Peel Tower, now transformed into a farm-house, is 326 feet above the sea level. The soil is pretty much the same as that which characterizes the poorer parts of Northumberland, and this lends itself to an illustration of the manner in which land of inferior

quality may be improved. Needless to add, the Duke of Portland has performed the duties of landlord with his accustomed generosity, and the place is now well equipped with buildings and so on. It was primarily intended to make it an agricultural school as well as a demonstration farm, but the farm has gradually become the dominant object. Dr. William Somerville, Professor of Agriculture in the Durham College of Science, has directed the experimental work up to 1899, but he has recently been appointed to a Professorship in Cambridge University, and has been obliged to withdraw. The objects aimed at are as follows :—

(*a*) Demonstrations of improved processes in the practice of the manuring, tillage, and cropping of land, particular attention being given to the economic improvement of poor grass land.

(*b*) Feeding experiments to demonstrate the relative value of food stuffs and systems of feeding for farm stock.

In other words, what is aimed at is practically to carry out on an extended scale, and with such light as recent investigation affords, the work done by Sir John Bennet Lawes at Rothampsted. One cannot of course say a great deal about the results at the present time. Before trustworthy conclusions are arrived at it will be necessary to compare the results obtained during a long series of years, and in seasons of varying character. The experiments, however, are being watched with the keenest interest by those engaged in the practical work of farming. From a list of the visitors in 1898 one can gather the sort of men who are attracted to it. This list includes sixty members of the Newcastle Farmers' Club, seventy of the Duke of Portland's tenants, eighty

farmers from the estates of Earl Grey, Lord Armstrong, and Captain Carr-Ellison, sixty of the Duke of Northumberland's tenants, fifty members of the Northern Allotments' Society, and so on. It is customary for the Professor to go round with each party, and, after showing the various plots, to "hold forth" from a little rostrum.

SOME EXPERIMENTS AND THEIR RESULTS.

Perhaps the most important of the conclusions at which Dr. Somerville has arrived or seems in the way of arriving, is his demonstration that the residual value of manures is to a large extent purely imaginary. This appears to result from his experiments as far as they have gone, and though it would be rash to dogmatise on the subject at this early time, the investigations now being carried out appear to promise a very important effect, as if it could be shown that certain manures have no residual value it would affect to an enormous degree the valuation under the compensation for improvements. It does not seem unnatural to suppose that the conclusion might be correct as far as most artificials are concerned, but practical farmers will be slow to admit that it is their experience with stable manure or feeding stuffs. The manurial effect of feeding sheep with cake is surely not exhausted with the first crop. Another discovery made—or perhaps it were better to say truth insisted on—by Dr. Somerville, owes its importance in a large measure to the local character. The genuine Northumbrian dislikes all unnecessary show and outward appearance, but he is fond of doing things really well. The landlord expects a good rent, but does not

shirk putting up solid buildings; the labourer gives a great day's work, but expects an adequate wage for it. Everywhere what is cheap and gimcrack is despised, be it in food or furniture. And in regard to manure this taste for thoroughness is perhaps carried to an extreme. "Aa put on a lot o' muck, there's nowt like muck—plenty o' gud muck, sorr," old John Coull, of Whittingham, used to say. Professor Somerville's experiments have shown that even in the use of "gud muck," wisdom lies in moderation. In other words, there is a point beyond which the lavish employment of manure ceases to return a corresponding profit. The results he obtained were so interesting that I reproduce the table showing what they were.

EXPERIMENTS ON SWEDES AT STAINDROP, COUNTY DURHAM, AND GARFORTH, YORKSHIRE.

Plots.	Manuring per Acre.	Yield per Acre.			
		Staindrop.		Garforth.	
		Tons.	Cwt.	Tons.	Cwt.
1	20 tons dung	18	15	14	16
2	20 tons dung, 5 cwt. super., 1 cwt. sulph. am.	20	5	15	12
3	20 tons dung	18	10	16	14
4	10 tons dung	18	12	16	15
5	15 tons dung	18	19	16	14
6	15 tons dung, 5 cwt. super., 1 cwt. sulph. am.	19	14	17	5
7	10 tons dung	18	10	16	6
8	10 tons dung, 5 cwt. super., 1 cwt. sulph. am.	19	11	16	16
9	10 tons dung, 5 cwt. super., 1 cwt. sulph. am.	18	5	17	11
10	Nothing	13	19	13	0
11	10 tons dung, 5 cwt. super., 1 cwt. sulph. am.	18	17	16	17
12	10 tons dung, 5 cwt. super., 1½ cwt. sulph. am.	18	7	16	12
13	10 tons dung, 5 cwt. super., 1½ cwt. sulph. am.	18	17	16	13

Experiments on Swedes—continued.

Plots.	Manuring per Acre.	Yield per Acre.			
		Staindrop.		Garforth.	
		Tons.	Cwt.	Tons.	Cwt.
14	10 tons dung, 10 cwt. super., 1½ cwt. sulph. am.	19	9	16	11
15	10 tons dung, 5 cwt. super., 1½ cwt. sulph. am., 4 cwt. kainit	19	0	16	9
16	10 tons dung, 5 cwt. super., 1½ cwt. sulph. am.	18	10	15	14
17	*5 cwt. super., 1½ cwt. sulph. am., 4 cwt. kainit	17	15	14	0
18	*5 cwt. super., 1½ cwt. sulph. am.	16	9	11	1
19	*5 cwt. super., 1½ cwt. sulph. am., 2 cwt. kainit	17	7	13	16
20	*6 cwt. bone meal and 4 cwt. dissolved bones	15	15	10	13

NOTE.—This experiment was carried out both at Staindrop and Garforth (the Demonstration Farm of the East and West Ridings of Yorkshire).

The bone meal and dissolved bones applied to plot 20 contains 225 lbs. phosphoric acid, which is three times the quantity present in 5 cwt. superphosphate.

Professor Somerville remarks that, "at none of these farms has an increasing quantity of dung brought a corresponding increase in the crop to which it was supplied. Where a big dressing of dung tells is in the subsequent crops of the rotation, but even this advantage does not justify the use of more than ten or twelve tons per acre." He further adds, in a later portion of his year's report, that, "the return per ton of dung has, at both stations, been approximately twice as high for the first six as for the last six tons." There is no need to dwell on the importance of the demonstration from the point of view of practical agriculture. It should be added that though the experiment referred to were not

* No dung on these plots.

actually carried out at Cockle Park, other of a kindred nature have been tried.

CONCLUSION.

I can only glance at a few of the other experiments, such as those designed to test the influence of manures on the production of mutton, a new, interesting, and most useful kind of investigation; those which bring the value of lime to a sure test and threaten to upset the notions commonly held; these applied to certain rotation problems and others of equal importance. As has already been pointed out the full value of many of these will only be apparent twenty years or so hence, when they have been applied under the most variable conditions. And the indirect result is of at least equal importance with the direct result. No one attempts to gainsay that the success of English farming depends on the ability to obtain the maximum produce at a minimum of expense. To do that we must call in the engineer with his labour-saving machinery, and also the chemist and analyst to show how most easily to make good the loss to the soil caused by raising food on it. Many of the stubborn old men go their own way regardless of the advantages offered by modern discovery, but their sons will not be able to take that course. For them, at least, it is a great thing to have this Demonstration Farm—this abiding object lesson on the value of science —set in their midst.

CHAPTER XIII.

A Dealer in Poultry.

BEING desirous of obtaining the same kind of information in regard to poultry that Mr. Hudson kindly gave me about butter—namely, what demand there is, and the best way of meeting it, I sought out Mr. C. E. Brooke at his place in the Central Market. It is scarcely necessary to say that he is an authority second to none in respect of this practical subject, a Past Master of the Poulters' Company, a salesman, owner of a fattening establishment in Sussex, and a writer on the question as well. I am glad to say at once that he takes a very cheerful view of the outlook, and, moreover, that he has a reason for the faith that is in him. But here, as in nearly every department of food supply, the English merchant is almost surrounded by foreign and colonial produce.

First there are great cases of Australian rabbits fresh and hard frozen. That trade in the middle of May was just beginning for the year. No rabbits are sent when they are out of season. In Australia the art of preparing for market and packing is thoroughly understood, and the rabbits are graded by weight and arranged in their different classes, the wholesale price for the best being in May about 9*d.* each. Their livers are bright

and healthy, and they look almost as if newly killed. Even more tempting in appearance are the ducks, also in three qualities—namely, prime (Aylesbury and Pekin), Aylesbury ducklings, and small dairy ducklings. Each hamper is stamped, "Board of Export, New South Wales," and has been examined by the Government officials. The Colonials nurse this export trade most carefully. In May the ducks are worth from 2*s.* 6*d.* to 3*s.* each, but in April they fetch nearly a shilling more wholesale. Mr. Brooke has established an agency of his own in Australia, and so is thoroughly versed in the business. These Australian ducks meet with a ready sale, but his best customers, he says, all prefer English birds, and there is a wide scope for increasing the supply. English Aylesburys, weighing 4½ to 5 lbs. in May, sell at from 3*s.* to 4*s.* 6*d.* each, and in April at from 5*s.* to 7*s.*, and are in good demand. Those I saw came from Oxfordshire, and were as beautifully packed as could be wished. A vast improvement in this respect has been noticed among our people during the past few years. Neither can Mr. Brooke get enough of the best English spring chickens, which during May sell at from 3*s.* 6*d.* to 5*s.*, and are worth 1*s.* more a few weeks earlier.

THE RUSSIAN POULTRY.

A great many Russian partridges were lying on the counter of Mr. Brooke's premises, but he says there is only a limited demand for them when the season is over. It is much the same with game as with strawberries. Very few people care for them except in the usual season. A market gardener who can manage to be ten days in front of his neighbour is sure to do well.

If he grows under glass and produces winter strawberries there is no demand. Russian fowls have a fair reputation and steady sale at from 1*s.* to 1*s.* 9*d.* each, fetching in May fully an average of the second figure. The Government of Russia is not so careful as the Australians, and occasionally during the mild winter something went wrong with the freezing arrangements, and the birds arrived rather "high." They are not so good looking as those from Australia.

THE DEMAND FOR ENGLISH FOWLS.

I felt somewhat dismayed, nevertheless, at seeing such tangible proofs of the extent to which our dinner tables are supplied from abroad.

"With all these coming in," I asked, "do you not find the market glutted, Mr. Brooke, and could people be recommended to go in for poultry rearing with any good grounds for hoping that they will effect a sale?"

In answer he showed me an advertisement of his which was appearing in the country papers as follows: "Wanted, two thousand live chickens weekly."

Here, indeed, was evidence worth any amount of vague opinion. Mr. Brooke assured me that the supply had not yet approached at all near to the demand. Probably the reason lies in the increased prosperity of the times in which we live. There are far more people who can afford to have a roast fowl for dinner than there used to be, and there are more first-rate hotels and eating-houses where chicken appears regularly on the bill of fare. Inasmuch as our own production has increased enormously and concurrently with enlarged imports, there can be no disputing the greatness of the con-

sumption, at any rate. The question is in what way those who have the facilities can most effectually take advantage of this opening. It would be a great mistake for any farmer to assume that he has an opportunity to get rid of the mongrel ill-bred fowls that clatter about his farmyard. Quality is wanted as much as quantity, and I asked Mr. Brooke, the farmer and breeder, how it was best to meet the requirements of Mr. Brooke the salesman of poultry.

The gist of his reply I now give.

HOW TO BEGIN.

Concerning the most profitable breed for the table there is no longer any room for doubt. It is the cross between Dorking and Indian game which has been so long recommended. Mr. Brooke is very partial to the Indian game, and holds that any breed will be improved by its introduction. It always gives most breast meat —the supreme test of a good table bird. Five or six Dorking hens and an Indian cockerel, or the same number of Indian hens and a Dorking cockerel, he recommends as stock for anyone who wishes to start in a modest way. He also believes in a plump bird. People have been heard to say that flavour is lost by cramming, but that is not his opinion. The fatter and plumper a bird is the better it is likely to be in quality. You must begin early. If any young thing is allowed to get thoroughly out of condition in infancy the lost ground never can be recovered. It is so with calves and lambs, and foals and puppies, as well as with chickens. Treat them well in their childhood if you would have them first-class in their maturity. It is out of fowls

so dealt with that money can be made. Rearing and fattening are, of course, two very different lines of business, and it is the rearing that the small holder will find most convenient. It involves no more work than can be accomplished by a girl of fifteen in her spare time if her inclination lies that way, and fattening is best done on a large scale. Mr. Brooke thinks a great stimulus would be given to the industry if great central fattening establishments were started in a number of counties, say, one in Yorkshire, one in Essex, one in Lincoln, and one in Devonshire. They could supply the large provincial markets, as well as send fowls up to London, when they are needed, and would afford a place of disposal for those who reared. In addition they would be standing object lessons to all concerned. Another advantage would be a saving in the cost of transit.

RAILWAY CHARGES.

On this matter Mr. Brooke has a grievance. He obtained many of his fowls for fattening from Ireland during the dear season, and the cost for carriage was 6*d.* each. Now, the birds were worth about 2*s.* 6*d.*, and 6*d.* was a formidable addition to the expense. Mr. Brooke thinks, and rightly, as it appears to me, that 3*d.* would be enough. The trade while it lasts is a considerable one, is tolerably regular in amount, and is fixed as regards time, all conditions tending to easy arrangement. It is not as if a consignment of chickens were occasionally sent and upset the traffic. I asked if he had similar complaint to make against all English railways, and he replied that some had become much

more reasonable, and were coming to the terms required by poultry-keepers. The Great Eastern had done a great deal in this way, and other Companies were taking example from it. But despite this improvement, there are lines on which the charges are still excessive. It is difficult to do much with the Irish trade, because so many Companies are concerned in it. Perhaps Mr. Plunkett or Mr. Anderson might take the matter up, as it closely concerns the Irish co-operators, in whom they are so much interested.

THE TREATMENT OF YOUNG CHICKENS.

For his fattening establishment Mr. Brooke likes to have chickens from three to six months old, and well developed at that. It does not answer to begin cramming earlier, because their crops are so tender. He insists strongly on the need of perfect cleanliness, particularly in regard to water. Older birds do not receive much injury from a little impurity, though cleanliness is an advantage even to them. Many cottagers in Essex rear capital chickens on the broad grass-lined roads, tethering the mother by a box in which she can shelter her young during rough weather, and the chicks run in the grass and white clover. A great object from a financial point of view is to have the broods early, as it is in spring that very profitable prices are realised. Besides, an early pullet is also a good layer, and gives eggs when they are most valuable. Mr. Brooke keeps all his March pullets for stock, and sends the cockerels to the fattening pens, never keeping the old birds more than a couple of years. For feeding he has found a meal invented by himself the most

economical and effective. It is made by grinding together daira, millet, hemp, barley, wheat, a small quantity of small maize, maw seed, and a little rice, and it costs him 26*s.* a quarter. He attributes its virtue largely to the variety. Meal made from one grain soon nauseates a fowl. The compound I have described is for the second or principal meal of the day. In the morning Mr. Brooke gives his chickens a mixture of barley meal, oatmeal, and milk. All this goes to show that in the opinion of one who makes a business of both rearing and fattening, and is also a prominent salesman, the agriculturist will be well advised, whether his holding be large or small, to undertake such an amount of chicken culture as he has convenience for, and the most promising line is for him to aim at producing the very best class of fowls. To encourage and help those who do so the Poulters' Company has voted a sum of money for prize medals at all County Shows where not less than fifty exhibits are got together.

OTHER BRANCHES OF THE INDUSTRY.

Another effect of our general prosperity is that at each successive Christmas the demand for turkeys is greater than ever. Not so many years ago only the comparatively rich were able to afford this dainty, but now nearly all middle-class families, and even many working men who are well off demand a turkey for the Christmas dinner, while it has become common for large employers to send one as a present to each of their superior servants. I myself know a man, or rather a woman, since the wife does the work, in Hertfordshire, whose turkeys for many years have

paid the rent of a house and small holding, and Mr. Brooke thinks that Essex, Surrey, and Sussex ought all to provide more than they have done. The turkey is a bird requiring exceptional care, but after all it does not cost much more for food than a duck does, and where a duck brings five shillings a turkey brings fifteen. Mr. Brooke attributes far less importance to soil and climate than to skill and knowledge. One point, however, deserves to be noted. Pressure should be brought on the Railway Companies to give easier terms and to arrange for the delivery of turkeys in London before seven o'clock in the morning. In every department of poultry-keeping it is certain that the educative work of the County Councils is bearing good fruit, only it might be better if the very poorest classes could be induced to take up poultry-keeping intelligently. The eggs and poultry that come to us from abroad are nearly all produced by cottagers. A small flock of geese or ducks, one brood of turkeys, a few clutches of chickens, can be more economically and safely reared, than a large number. They may be kept under the personal oversight of the owner. They use the waste there is in every family, and they are not so likely to contract disease. It will be better still if a number of people combine to buy food, which should be of the best quality, at wholesale prices. They will find it advantageous to co-operate to the extent of planning for the disposal of all their stock at the rate of so many a week—not flooding the market one day and starving it the next, but forming a regular and trustworthy supply.

CHAPTER XIV.

A National Organization.

ANYONE who has gone much about the country since the years when agricultural depression was at its worst, cannot fail to have noticed that the English farmer has been gradually changing his mind about poultry. He used to regard cocks and hens as the perquisites of his wife. If once a year she could buy a new gown out of the egg-money he was quite content. The chickens, usually crossed and inter-crossed to infinity, cackled about the steading by day, and roosted at night in some neglected outbuilding. Very few people, indeed, dreamed that poultry could ever repay in the shape of a solid income the expense of careful breeding. Then the man-in-the-street, who knew nothing about fowls, but saw that we were paying about £4,000,000 a year—last year it was £4,500,000—for foreign eggs, began to say, "Why do our agricultural people starve, and yet let others supply our markets with eggs?" Of course, the farmer vowed the outsider knew nothing of the matter; but the same cry arose also from experts who had a claim to attention. County Councils took the matter up, lecturers were sent round the country, the subject was introduced into technical schools, and poultry-keeping was preached right and left. The question one

would like to have answered to-day is: "What is the net result?" Unfortunately we can only answer with a guess. The British Government, though directly or indirectly it spends a great sum of money in teaching people to keep poultry, has not yet taken the trouble to collect statistics. Probably enough the lively interest which is now being aroused may in time force the Board of Agriculture to get poultry included in the returns, as they are included in those of France. And while the officials of that department are about it there is another small reform that may be recommended to them. No praise is too high for the exceedingly clear treatment of figures in the Department; the returns are almost perfect in form. But all this is in vain if they are not full and trustworthy. The system of collecting them by means of the Royal Irish Constabulary, carried out in Ireland, is more likely to be accurate than our plan of employing the officers of the Inland Revenue and having the statistics sent in by post. Many farmers will not send in returns, and the collectors are obliged to estimate.

GROWTH OF THE BUSINESS.

Still, though figures are not obtainable, the growth of the industry is indisputable. I asked Mr. Edward Brown what he thought of it, and he should know, as for many years he has lectured for several County Councils, and is one of our leading experts. He says the increase generally is marvellous, though there are many districts that remain precisely as they were. The external evidences of the increase are the portable houses which may now be seen on various parts of

farms where eight years ago nothing of the kind existed. About the villages now cleanly-kept runs are visible, and it is common to see well-bred birds where only mongrels were before. Yet we are left entirely to conjecture as to the extent of the business. In Ireland about three hens are kept to every head of the population, and in France the proportion is nearly the same. Suppose, at a venture, we assume the average in England to be only one, that would give about 40,000,000 hens. In France they value these stock-birds at 2fr. each, so that *1s. 6d.* is a low estimate, but it comes to £3,000,000. How many eggs will a hen yield per annum? A very good one will lay 150, and a poultry-keeper, thoroughly up to his business, would not keep a hen to lay if she yielded less than eighty eggs a year. Thus, if we take sixty as an average, the error is likely to be on the side of moderation, but it gives a national production of 2,400,000,000 eggs. A shilling for twenty is a low estimate of price. Yet it yields £6,000,000. In addition we produce a certain number of table fowls, say 20,000,000, valued at *1s. 6d.* each. By this means we arrive at the following figures, which may be regarded as a statement of the minimum value of English poultry:—

40,000,000 laying hens at *1s. 6d.*	...	value	£3,000,000
2,400,000,000 eggs at 20 a shilling	...	,,	6,000,000
20,000,000 table fowls ...	...	,,	1,500,000
			£10,500,000

Or, putting aside the permanent stock, we have a yearly revenue of £7,500,000 from the chicken-run. If wheat

continues to fall a little while longer, its total value will not exceed that of fowls. That, surely, is one good reason why our Board of Agriculture should collect statistics, as is done in Ireland and in France.

THE DIFFICULTY OF DISTRIBUTION.

It has to be borne in mind, also, that beyond teaching, the Government offers the farmer no assistance in the way of finding markets or making bargains. This may be right or wrong, but it is not the way of foreign countries. The Danes, the Russians, and the French do not think it beneath the dignity of an Administration to nurse a trade in eggs or butter, to find out markets, and even in some cases to assist in the bargaining. The National Poultry Organization came into existence in order to remedy this defect. Its ruling spirit is Miss Smith-Dorrien, who for some years past has greatly helped to encourage poultry-keeping round about her home at Aylesbury. But she and others interested soon came to see that the great difficulty to be overcome was that of marketing. The English farmer in this respect lags behind the time. His arrangements are copied from those of his ancestors, who had quite a different set of conditions to meet. In their day the population was more evenly distributed than it is now, and the dairymaid could carry to market her butter and her eggs, her fat goose when she had one, her ducks and cheese, with the assurance that she could sell the whole to her neighbours. This is precisely what goes on to-day in a county like Cumberland, where small farms abound and there are no large manufacturing towns. But elsewhere industry has collected people into huge

centres, the markets of which have to be approached in a different manner. Yet the farmers keep on in exactly the same old way. One district may be given as typical of many. There the eggs are collected by a carrier, who is also a grocer, and gives in exchange tea, sugar, or whatever is required. He goes once a week, and the women give him eggs when they happen to have them or need other articles. In his turn he makes them over to a village shopkeeper, who, when he has enough, sends them off to a small town, the dealer there waiting till they accumulate to a quantity worth consigning to a large merchant. So eventually they reach their destination at the age of two or three weeks. At the end they are not clean, they are not tested and guaranteed, they have most likely been packed in straw that spoils their flavour, and they are not graded in size, but mixed together big and little—in a sentence, they are wholly unfit for the better class of shop, and drift finally into the cheap bad trade.

ORGANIZING THE SALE.

Lady Cranborne and Miss Smith-Dorrien vividly realised that the first necessary reform was organization. They called a meeting at Lady Cranborne's residence in 1898, and the society was originated. It seems to be doing good work, and to have resisted the temptation to be too ambitious. The aim is not to do people's marketing for them, but to show them how to do it for themselves. When a district seems ready—that is to say, after a lively interest has been excited in poultry-keeping—and the people do not know how to sell their eggs, they dispatch an organizer to the scene. But the

first person they look out for is a local volunteer, *i.e.*, someone on the spot who is willing to incur the preliminary trouble, and who will collect the eggs. The organizer finds a market for the people, but they make their own bargains. Indeed, what the society really does is to show that all eggs sold by their members should be tested, guaranteed fresh, graded, and properly packed. It is no easy matter to teach the last-mentioned part. In Ireland the difficulty was so great that in the end they had to engage an expert from Denmark, Mr. Schwarz, who is giving lessons and doing capital work. The Danes seem to be pre-eminent in the art of packing.

It will be seen, therefore, that the National Poultry Society Organization is unostentatiously but effectively producing a great change. The idea of enlisting local volunteers, and allowing the movement to grow of itself, is especially to be commended. It would not have been difficult to make a greater parade, to appoint many salaried officers, and open branches right and left; but the end would probably have been financial failure, as there are many districts not yet ready for the movement. Again, it is better for the society not to be a trading concern. At present it sides neither with the seller nor with the buyer—it operates against nobody save a few of the all-too numerous middlemen. The condition of the trade is such as to afford it plenty of scope even within this limit. At the time of writing the farmers of Devonshire are obliged to sell their eggs at a shilling for twenty, while those of Lancashire are obtaining a shilling for ten. The difference seems ridiculous when our means of transport are considered, and when both producer and consumer would be immensely

benefited if the surplus eggs could always be sent to the best market.

TO PRESERVE EGGS.

A friend of mine, well known as a poultry man, gets over the difficulty in this way. He writes :—

"I put down eggs in lime, freshly-slaked lime, in a crock, about the consistency of thick cream, seven or eight dozen in a crock. My housekeeper says she never has a bad egg. She has them now in use put down in July and August. It is better than selling when they are so cheap, and if more people did so there would be fewer on the market when eggs are cheap and plentiful, and more for kitchen purposes when new-laid eggs are scarce and fetching high prices. There is a system of wrapping eggs in butter-makers' paper, packing in a box, and turning daily to prevent the yolk adhering. I believe it answers, but some say not. There is a revolving box—Jansen's process—patented. Some people rub with olive oil, some with butter, some with olive oil and beeswax—all are effective. Others use dry salt, but salt absorbs the liquid in the egg, and is not so good as the wet lime process. Preserved eggs will not poach—so they say, the yolk sac breaks. It is important to have fresh lime—slake it ; a pound of lime to a gallon of water will do. Some add a little cream of tartar, and some boil the lime and water, but I do not find it necessary to do either. All eggs put down by any of the processes should be quite fresh, *i.e.*, put down as soon as laid."

Any of the plans mentioned in this interesting letter would help poultry-keepers over the great difficulty of

disposing of eggs during the early summer months, when a remunerative price is unobtainable. Lime-water, of course, kills all the microbes, but the Dutch preserve in soluble glass—only this makes the shell so hard that a small hammer is needed at the breakfast table. But the great object is to get them to market in first-rate condition when they are profitable, and here we must take a lesson from the foreigner. Looking over a case newly arrived from abroad, every egg was full—it is, of course, well known that as an egg grows stale it begins to shrink and leave a hollow space at one end.

THE IMPORT TRADE.

In one respect a survey of the import trade is very hopeful, because it shows how very quickly a trade grows in these times. A few years ago the imports from Russia were so insignificant that they were not mentioned separately, but included among those from other countries. Yet last year Russia headed the list, sending us eggs to the enormous value of £966,129. Russia possesses over England no such climatic advantages as have been held to account for the large importation from France. It has been said, again, that if too many go into the business prices will be ruined by competition, but we are certainly far from that point yet, there being apparently no limit to the increase of consumption.

Evidences of the zest with which the matter is being taken up are numerous. It is true the early idea of immense poultry farms is not taking root, but farming for poultry is largely on the increase, and it has been found that a great number of fowls may be kept safely,

provided that the hutches are regularly moved, and the birds not allowed to remain too long on the same ground. One man I heard of keeps a winter stock of 1,600, and another of 2,500. Neither gives the land wholly up to fowls, but cultivates the usual crops. A third instance is extremely interesting. Some years ago a tramp was given a job on a poultry farm, and taking to the work he kept on at it, and in due time started for himself. At the present moment he is a prosperous and respectable man, owns the freehold house he lives in, rents a small farm, and is credited with laying by money—all out of fowls.

For the convenience of readers I append a table of the imports of eggs.

IMPORTS OF EGGS, 1897.

From.	Quantities.	Values.
Russia	375,880,000	£812,297
Germany	356,622,000	813,022
(*Large quantities of South Russian Eggs come via Germany*)		
France	321,080,000	1,022,869
Belgium	295,702,000	768,077
(*Chiefly from Italy and Austria*)		
Denmark	209,856,000	596,282
United States of America	13,861,000	42,347
Portugal	6,685,000	17,598
Egypt	6,562,000	13,386
Holland	6,346,000	16,985
Spain	5,886,000	14,674
Morocco	4,565,000	11,321
Italy	2,344,000	7,890
(*Chiefly from Italy and Austria*)		
Austrian Territories	2,191,000	5,855
(*Many Austrian Eggs come through Germany and Belgium*)		
Turkey	1,419,000	1,489
Canary Islands	351,000	816
Norway	36,000	134
Argentina	15,000	52
Total Foreign Countries ..	1,610,207,000	£4,148,653

Imports of Eggs—continued.

Colonial, &c.		Quantities.	Values.
Canada		68,252,000	£193,998
Channel Islands		4,148,000	10,822
Gibraltar		706,000	1,929
Malta		467,000	1,321
British East Indies		40,000	84
Total British Possessions ..		73,603,000	£208,154
TOTAL IMPORTS	Foreign Countries ..	1,610,207,000	£4,148,653
	British Possessions ..	73,603,000	208,154
	Total ..	1,683,810,000	£4,356,807

CHAPTER XV.

England's Market Garden.

THERE are few prospects more refreshing to the eye than a fertile Kent landscape in the month of May, and the country through which the Darenth steals is typical of the whole. The gardens and fruit plantations are still gay with blossom, the hawthorn is out in the hedgerows, and the chestnut in the parks. About Eynsford hills there are corners bronzed with the yellow broom—wild corners they are, where within smell of London smoke the fox and the badger lurk. I thought of Horace and the other poets as I looked on it all—those bards who have sung so delightfully of "the wholesome fruit my garden yields," of a cottage steeped in love and roses, of the murmur of water and the hum of bees. But why go on numbering those delicious dreams? The fatness of Kent is not begotten of poetry, which oftener lurks on a barren mountain side than in the more fertile field, and would appear almost to thrive on hunger. I should say that on the whole the men of Kent are doing as well as those of any other county in England. They do not complain so much of a rural as of an urban exodus, London for ever stretching out in that direction, the tendency being to Cockneyfy even the most rustic villages. Picturesque cottages, with heavy

moss-grown thatch, get pulled down, and are ever replaced by red-brick monstrosities—those dingy villa-looking structures that seem to have been lifted bodily from streets in the East End. Attached to them are the miserable back gardens thought to be sufficient in town. Old Kent is fast disappearing, and giving place to a brand-new one.

MARKET GARDENING.

You may call Kent the kitchen garden of London, and in that capacity it cannot languish as long as "the great wen" continues to grow. London cuts her cabbages and digs her potatoes, and plucks her strawberries here, and in consequence land is being continually taken away from the plough and the hop-pole and turned into garden or orchard. In 1873 only 10,000 acres were in orchard; in 1898 this had mounted up to 25,000 acres; and in 1888 12,000 acres were devoted to small fruit, but in 1898 there were no less than 22,000 acres used for that purpose—proof enough in itself that Kent finds her main business to consist in supplying London with fresh fruit and vegetables. Near the houses lying sweetly in May weather among the orchard trees are the famous hothouses where the finest grapes in the world are produced. The more people flock into town and the more commerce prospers, the more demand is there for the produce of these homesteads.

Some years ago I visited this same district later in the season. It had been an extraordinary year for fruit, and as a consequence—this is no paradox—the men of Kent were out of all heart. They could get no price worth having. What they did get often dwindled to less than

nothing, to something to pay, before they met the expenses of carriage and commission. As a result plums were left to rot on the trees, and pigs feasted on the apples that were allowed to tumble and fall on the orchard grass. It is not a century, or even a decade since this was a usual occurrence, and yet so swift has been the advance it reads like a record from vanished ages. However large the fruit crop of to-day, we may assume for a certainty that it will be quickly absorbed, and in a manner satisfactory to the growers. You find hard-headed men of business going in for an enormous increase of their crops. Two brothers have between them 650 acres wholly devoted to strawberries. Mr. John Wood has about 140 acres of gooseberries. The Messrs. Wood have nearly 2,000 acres under fruit. In 1899 they planted 45,000 black-currants in one parish.

RECENT CHANGES.

It is extremely interesting to note how far these changes have been produced by external influence. The Kentish fruit-grower, like farmers elsewhere, and indeed like almost everybody connected with land, is extremely conservative in his methods. He went muddling on for years wasting his fruit till outsiders stepped in and gave the industry a fillip. Take apples as an example. I myself have seen—and thousands of others can say the same—beautiful apples left to rot in the orchard by the ton. But an agitation in favour of cider was started, and thanks, not to the enterprise of farmers, but to the energy of platform orators, the demand was so enormously increased that the makers

cannot get as many apples as they could use even in the most abundant year. The manufacturers in one county scour other counties in search of fruit. Kent would in any case have benefited from this, but the movement spread to the county itself, and Kentish cider, that once was famous, is now so much in demand that the makers have to supplement their own apples with supplies from other districts. Still more striking is the industry of jam. When many years ago the late Mr. Gladstone at one of his Hawarden gatherings advised his tenants to take up fruit-growing and preserving, so-called practical men laughed at him. But what an immense amount of capital has been laid out in jam factories during the last few years. There is one near Liverpool that covers seven acres with its works alone, and no less in London than in the great provincial towns these huge places have sprung up. One could almost have counted on one's fingers the old-established firms that existed previously. Now a single factory near Swanley—and this is by no means an exceptionally large one—turns out in the year 3,500 tons of jam, 850 tons of candied peel, and 108,000 bottles of preserved fruit. The great jam makers exercise an enormous influence on the orchards, since apple-pulp is the basis of the cheap three-pounds-for-a-shilling jams. They may call them strawberry, gooseberry, currant, or what they please; they all consist of apple-pulp flavoured with something else, and one is glad not to hear of any more serious adulteration. The cider-makers, however, feel it as a kind of injury that the price of apples should be run up by those who are seeking them in order to make strawberry jam. The movement derived its first impulse from the platform, but it has been enormously strengthened

by the cheapness of sugar. It may not be a thing to be particularly proud of, but England is now the world's jam-maker.

FOREIGN SUPPLIES.

Whilst visiting some of the fruit-farms and orchards of Kent I was accompanied by the junior partner in a firm of fruit importers. He is accustomed to spend several months of the year abroad making contracts, and is well informed as to the methods pursued in various parts of the world. In some countries the growers work together, but in others they do not find that to their advantage. He took Sicily as an example of individualism. From Sicily we obtain most of our lemons. They are grown on private estates by individual owners. My friend makes a bargain with each proprietor to take his crop at a price varying with the quality. With the Spanish orange-growers the practice is different. The groves are often so small that it will not pay him to go round to the individual owners, nor would it be profitable for them to seek a buyer. It is usual for a local man to collect the produce of a great number of groves, and he is thus able to enter into a large contract with the importing firm. What interested me most in this was that something of the kind is being done in England. During my inquiries I happened to come across a man in Covent Garden who is really solving a difficult problem to his own great advantage as well as to the convenience of his neighbours. Early in the season he starts on a little country tour, and on his way buys up the produce of fruit gardens and orchards. Then he returns to London and makes as many contracts as he

can with factories, retail dealers, clubs, restaurants, and so on. There is a substantial margin of profit between the price he gives and the price he gets, so that if in the end when he is compelled to sell his surplus by auction it does not realise well, he is nevertheless safe. Growers like this plan because it saves them trouble and risk. If they themselves were to undertake the marketing they are as likely as not to send when there is a glut, and thus have to put up with small prices; whereas the dealer, being on the spot, can choose his own time. Moreover, if there is any considerable bulk to be dealt with, or if two or three moderate quantities lie adjacent to one another, he is always ready to offer a net sum, he himself undertaking the business of packing and carriage. It seems to me that if this system were extended it would prove of the utmost service to the small grower. Something very similar is done with apricots in France. They are grown by a very large number of people, but collected, bottled, and sent to be made into jam by one of the many industrial associations that abound in France. One cannot help being struck with the keenness of jam-makers to acquire land. Many of them own large estates, and their young plantations of apples, pears, plums, gooseberries, currants, and raspberries seem to point the moral that they, at least, know how to make a profit out of land, even in these days. They say that the business is being overdone, that too many people are going into it, and that profits are decreasing largely, but to this I do not attribute much importance. The increase of garden and orchard ground by enlarging the supply was bound to lower prices; but, on the other hand, a small profit on the unit comes out a very large sum when a gigantic total is being dealt with. Besides,

there is room for a boundless increase in consumption. England has begun to consume large quantities of ripe fruit and jam only in recent years; other countries will follow her example, and the export trade is certain to increase. In countries where the price of sugar is artificially kept up, people cannot afford to preserve their own fruit. Our policy has thrown the sugar refineries into ruin, and caused these immense jam factories to rise in their place.

METHOD OF DIRECT SUPPLY.

Another thing that has helped the fruit-growers is the increase of direct communication between producer and consumer. It is the fashion now to sneer at the late Lord Winchilsea's schemes. No doubt they were scarcely what he deemed them, but his agitation led to a far greater intercourse between town and farm. I have met many people flourishing where others starved, because they had got into the way of sending their produce direct to families in town—so many eggs, so many chickens it might be, and so much butter or cream. They usually obtain a price beyond that of the market, partly because to succeed they must make goods of superior quality, and partly because there are many Englishmen who do not mind paying a little more for what comes direct from the farm. If they can be assured of eggs fresh from the farmyard, butter from the dairy, chickens killed and vegetables gathered on the morning they are dispatched, a little more in price does not matter to them. They are a very superior set of customers, and do not expect that absolute uniformity which is insisted on at the shops. Kent has advanced

greatly in bee-keeping and poultry-keeping as well as gardening, and to some extent thrives on this method of direct supply. It has been aided by the improved means of transit. After continued dunning, and perhaps stirred up also by the success of the Parcels Post and the precision with which it is worked, the Railway Companies have in several instances lowered their tariff and accelerated their speed, so that garden and dairy produce is now delivered at reasonable terms in London. Owners of orchards have reaped considerable benefit, and I have heard of several who now sell large quantities of both cooking and dessert apples in this way.

VARIETY IN TASTE.

My fruit-importing friend gave me some curious examples of local taste that should be taken into account by anyone entering on this business. He started by talking about peels, which, of course, are made from foreign fruit. In the South of England lemon is the favourite for cakes and puddings, twice as much of it being used as of any other, and in Lancashire the same taste is almost exclusive. But further north one finds a great change. The pitmen of Durham and Northumberland, always reckless of cost so long as their fancy is indulged, use one of the most expensive, a so-called "large, thick lemon," which is really a mongrel peel, produced by crossing lemon and citron. About thirty years ago a cargo happened to be landed in the Tyne, and the owners, not knowing what to do with it, disposed of it to a speculator, who sold it to the miners. The taste thus accidentally started has been accentuated by time. In Scotland about four

times as much orange peel is used as of any other. Similar differences prevail in regard to fruit. In the south the taste is all for strawberry and sweet jams; northwards they like a sharper flavour, and patronise damson and red currants. But whatever their likings may be, it is evident that very much more fruit of every kind is used now than was twenty years ago—a good thing too. Within one's own memory there was a class of people who were almost vegetarians by compulsion. They could not afford meat more than once a week at the best. Health was maintained because, coarse though the food was, it was wholesome. But in the north it is notorious that the porridge and milk with the oat-cakes and cheese on which people practically lived are being gradually neglected, and in the south the "pudding" whose praises William Cobbett used to extol, the coarse bread that formed so much of the diet of the poorer classes, and even the frumenty that Mr. Hardy describes with so much gusto, have gone out of fashion. Meat and white bread—Australian mutton, New Zealand beef, frozen hearts, rabbits, and kidneys, eaten with bread whitened sometimes with chalk—form the staple articles of diet. I do not believe for a moment that they are healthy unless supplemented by vegetable food, and the home workman knows this. His consumption of fruit grows with his consumption of meat. But it is a fact often noticed that country girls, who do not get lessons of health forced on them in the same way as townspeople, and who therefore live to a large extent on cheap tea and very white bread, are troubled with diseases of which their mothers knew nothing, anæmia and indigestion being the chief. I do not pretend to write as an expert on this subject, but

common-sense and experience alike tell us that ripe fruit and vegetables are necessary to a system nourished chiefly on meat and bread. It is just because the majority of people are physicians enough to know this that the kitchen garden of London is continually being increased, and that greater numbers are engaged in it. But to purely agricultural Kent these remarks do not apply. Where fields are tilled in the ordinary way there are the ordinary complaints—falling rents and no profits—and nowhere is the Labour Question more acute.

CHAPTER XVI.

Flowers, Fruit, and Ladies.

FRUIT and flower farming must become more and more important as a branch of agriculture. With the view of getting an expert opinion on the subject, a representative of the *Morning Post* called on Miss Goodrich Freer, who was Honorary Secretary of Swanley College for six years. Miss Freer, with several of her colleagues, recently severed her connection with the college for reasons connected with the management, but not affecting her sense of the value of the education received. She is more than ever convinced that there is a great future for horticulture in this country; but at Swanley at present she thinks they are not going the right way about it. Swanley College was, in its original conception, a school for teaching practical gardening, with the view of providing educated men and women with a new means of making a living in a manner agreeable to themselves. It was thought that in this way practical gardening might be greatly improved. Six years' experience has convinced Miss Freer that horticulture for the educated classes must lie in the direction, not of employment in gentlemen's gardens, but of fruit and flower farming. The working classes, by the help of Technical Schools, can supply as many practical

gardeners as are wanted, as may be seen from a study of the latest lists of successes in the Royal Horticultural Society's examinations.

THE FUTURE OF WOMEN GARDENERS.

"The so-called educated classes," said Miss Freer, "are at no special advantage in the direction of practical gardening. At least two out of the three students from Swanley who took the highest award of the Royal Horticultural Society have belonged strictly to the working classes, holding County Council Scholarships. And so I believe that horticulture for the educated classes, who have a little capital, must lie in the direction of fruit and flower farming. As to the future of women gardeners, that I think also lies elsewhere than in the garden itself, as they themselves appear to think, for out of the hundred women who entered Swanley College during my six years of office, sixteen only, holding Swanley certificates, are doing practical work, and this in many cases only in institutions or as combined with teaching in girls' schools. However satisfactory this may be, it does not tend to perfection in horticulture."

"Can farmers here compete with the cheap and plentiful fruit which comes from abroad?"

"To make fruit farming in this country a success two things are necessary. The taste of the community in the matter of fruit must be cultivated, and we must be able to secure equality of value. Home-grown fruit, as every epicure or connoisseur knows, is infinitely superior to fruit that comes to us from abroad. Foreign fruit is plucked before it is ripe, and has to cross the sea before it reaches us. This completely spoils fruit. Even the

short voyage from Jersey to this country affects the fruit and makes it taste vapid. Those who know good fruit will pay any money to get it from English orchards and gardens at the earliest possible date. And if the people who are now content to eat Californian apples and French apricots could only be brought to see the difference between these products and home-grown fruit, the market would be enormously increased at once."

THE CO-OPERATIVE SYSTEM.

"And how is this taste for good fruit to be created?"

"By keeping the market supplied with it. And that, in my opinion, can only be accomplished by means of co-operation. Supposing a fruit farmer has forty cherry trees, and only ten of them supply him with the best cherries, he must either deceive his purchaser or frankly confess that his supply of good cherries is extremely limited, in which case he will most probably fail to find a market; but on the co-operative system all this would be changed. The smallest fruit farmer would then be able to classify and thus to dispose of all his cherries from the best to the poorest, and the public would know exactly what it was getting. Of course, if a fruit farmer has enough capital he is independent; but such farmers are few and far between."

"That would mean a large number of fruit farms within easy distance of each other?"

"Quite so; and as certain counties are specially fitted for fruit farms and others not, that should present no difficulty."

"What, then, is the average size of a fruit farm that can be made to yield sufficient profit?"

"Forty acres constitute an average fruit farm, I should say, though there is obviously no limit to the size either in smallness or bigness."

TO STOCK A FRUIT FARM.

"And to stock a fruit farm of forty acres, what capital would be requisite?"

"That is a point on which I do not speak with any dogmatism, but I should say that £200 would be quite sufficient. I do not for a moment mean, you must understand, that someone whose entire worldly possessions amounted to that sum could take a farm of forty acres, stock it with trees and plants, and make a livelihood out of it from the beginning. For the first few years the fruit farmer, who has stocked his own farm, and not taken one over already stocked and flourishing, must be prepared to reap small profits. The farmer must be independent of his farm to begin with. A seven years' lease will enable him to reap good profit from raspberries, currants, gooseberries, and bush fruits; a fourteen years' lease gives him a fair chance with plums, and the planting of apples, pears, and cherries is a permanent improvement of the estate and a matter for agreement with the landlord. He can of course hasten the day when his farm shall begin to pay him by cultivating flowers, keeping poultry and bees, or whatever his ingenuity may suggest. An agricultural farmer, for example, could make fruit and flower farming an additional source of income to himself without any great outlay, and he would be independent of his trees and flowers till what time Nature makes them fruitful. Of course, it is not all loss to him when his trees are

growing, for should he leave the farm, he is entitled to very considerable compensation for the greatly increased value of the stock. There he is at an advantage over the agricultural tenant farmer.

THE MOST DELIGHTFUL OCCUPATION IN THE WORLD.

"But will not this necessity of the fruit farmer being independent of his farm for the first few years militate very much against the growth of fruit farming in this country?"

"I cannot imagine why it should. It is the most delightful occupation in the world, and one which yields most profitable returns. There must be an immense number of people who have the necessary qualifications for successful fruit farming, but are not engaged in it simply because it has never been forced on their attention."

"Is the fruit farmer compelled to employ much labour throughout the year?"

"Very little, indeed, comparatively speaking, except for certain short periods. His outlay in that direction is the less that his market is immediate, there is little storage or care of stock; and that is a point which ought to tell heavily in favour of fruit farming."

"And you would combine the culture of flowers with that of fruit growing."

"Most certainly; they can be carried on together and in the same soil. By flower growing, however, I mean more particularly the cultivation for sale of roots and bulbs. If you love your garden and take proper care of it, it will yield you fifty-fold. I can tell you of a case I knew where two girls whose family had got into financial

difficulties through the political state of the country—they lived in Ireland—took to the cultivation of an herbaceous garden, and in five years had saved the situation for their father and brothers. They were at least ten miles from a railway station, and all communication with their customers was carried on through the parcel post. And they did not spend more than five shillings a year in buying seeds to restock their garden. It was terribly hard work for them, but then they were practically pioneers, and had to overcome exceptional difficulties."

DEVELOPMENTS OF THE BUSINESS.

"What about the cultivation?"

"The working year is a short one. You plant bulbs, for instance, in October, and then as far as they are concerned you can take a three months' holiday. In the early spring you must attend to them again when they are in bloom; and in April, May, or June you lift them. Two years ago I bought, in Ireland, a collection of bulbs, and now they have increased ten times in value. Holland, at present, supplies us with most of our bulbs; but you cannot depend on them. Once establish a reputation for growing the best bulbs, and you will soon have as many customers as you wish who are willing to pay a good price for them."

"But you do not advise the cultivation of either fruit or flowers, bees or poultry, exclusively?"

"Of course not. I can give you another case of a friend of mine who keeps a stud, a farm, a market garden, and several shops. You can see from the last item that she must be a woman of position, for no

middle-class person ever keeps a shop, you know. But you can see how they all work with each other. The stud supplies manure for the farm, and the farm supplies straw and fodder for the stud, and both help the garden that supplies the shops. I am sure that there is a great future in store for flower and fruit farming—a future in which women may, if they choose, play a great part."

CHAPTER XVII.

A Cider Enthusiast.

HEREFORDSHIRE is one of those fortunate counties that have suffered least from agricultural depression. In driving down the Valley of the Wye in sunny May weather, it seemed to me as if I had never looked on a fairer or fatter land. Green woodlands, orchards gay with blossom, meadows chequered by daisy and buttercup, and the beautiful river winding through the diversified country formed, as Cobbett would have said, "a scene to thank God for." In its manifold interests has lain the salvation of Hereford. There are the famous cattle, but side by side with the meadows where they feed are fruit gardens and plantations of apples and pears, and hop-fields and flocks of sheep.

THE CIDER INDUSTRY.

Yet the industry that has grown most during the last few years is undoubtedly that of cider. It was a decaying one when depression was at its height. Now, however, it employs a vast and increasing number of men. Many new and flourishing mills have sprung into existence, and the extension of the industry is limited only by the difficulty of procuring apples. This,

in a large measure, was the result of agitation. When, some years ago, Mr. Radcliffe Cooke became Member for "the apple trees," he commenced in the most energetic manner, in season and out of season, often to the extent of becoming a "bore"—let the word be taken as praise—to sing the praise of cider and perry as the most wholesome and invigorating beverage that the wit of man had been able to concoct, the expressed juice of the apple and pear, the wine of the country, the nectar of Hereford. Therefore one had no choice in the matter. It was absolutely necessary to obtain from Mr. Radcliffe Cooke the latest view of the industry. As might have been expected, he was discovered in an old Henry VII. house, surrounded by fruit trees, near a village rejoicing in the name of Much Marcle, Marcle being a corruption of Marchelai—*i.e.*, the land in the marches. Four avenues of pear and apple trees used to lead up to the dwelling, and some most interesting specimens, planted in the reign of Queen Anne, and incredibly large of timber, still attest to the perry-loving taste of the Eighteenth Century. Sitting before an open window that looks over miles of tilth and orchard to the Herefordshire and Worcestershire Beacons, I asked the Member for Hereford to discourse of cider as it is at the present time.

HOW CIDER IS PRODUCED.

"It is produced by three classes of people," said Mr. Cooke. "First by the large manufacturers such as are to be found in Devonshire, Hereford, Somerset, and Norfolk, whose businesses have all been extending; secondly, by a number of smaller people who have

started within the last three or four years; and thirdly, by the farmer."

"How do the last get on?" I asked.

"Farmers," he replied, "still continue to make a good deal of cider at their own mills for home consumption and for sale, but not nearly to such an extent as they formerly did. Either to save themselves trouble, or because they find it more profitable, they prefer now to sell the fruit to the cider-makers. They also sell a good deal of what they call sharp fruit—that otherwise would be used in cider of varieties for which Hertfordshire is specially distinguished—to the jam-makers. Cheap apples are the basis of all those cheap strawberry and other jams." (I refer in another chapter to this practice of making apples into "strawberry" jam.) "If also," continued Mr. Cooke, "a cider manufacturer be near, the farmer often sends his fruit to be ground, and then takes back the juice, just as he used to send corn to the miller and take back the meal. A third practice is, if a cider manufacturer has one of Lumley's filters (this is a large machine introduced from Germany, and costing about £60), he lets it out to the farmers, or filters their cider for them. The reason for this is that as the taste for cider becomes more educated greater clearness is demanded by the consumer. It used to be quite the other way about. The labourer liked it 'lousy,' as he called it. Sir George Birdwood used to recall a saying of an old labourer illustrating this. The man had received a glass of the old sort from a farmer. 'This be splendid stuff,' he observed, thankfully, after tasting it; 'her be as bitter as wormwood, and as lousy as her can crawl.' But they do not want it bitter and 'lousy' any more."

SOME OF THE CHOICE SORTS.

"And what would you recommend the farmer to do with his old mill?" I asked.

"Keep it, by all means," replied Mr. Cooke. "I admit," he went on, thinking of the principle enunciated by Mr. Hudson, "there will be more uniformity of quality and regularity of supply if the business got into a few hands; but we should lose some of the choicer sorts made from special varieties of apples. It would never do for big makers to go in for them. They would fall into the way of producing cider as uniform as bottles of Bass. Cider is more like wine than beer. It is juice squeezed out of the apple just as wine is juice squeezed out of the grape, and I for one would not like to lose the fine old varieties."

This point was further discussed with another expert, but of that anon.

"I like," went on Mr. Cooke, "to see a farmer make as much as he can of his own resources. And you would wonder what can be done with a very tiny orchard. One small holder, a neighbour of mine, made last year, out of the produce of two pear trees, as much perry as lasted his household for twelve months. Formerly, when I did not make much cider myself, I often took a hogshead from a small occupier for family use and my own consumption. Some of the small people make excellent cider I assure you."

HOW LAND IS AFFECTED.

"But how does all this affect land?" I asked, for I am much more interested in seeing land brought back to

effective cultivation than in almost any other question. "Does the demand from the cider counties affect other districts of rural Britain?"

"Most certainly," he replied. "The manufacturers of Somerset, Devon, Norfolk, Kent, and even Hereford, have all at times been compelled to buy apples outside their own neighbourhood. There is no tax on cider, so that we cannot measure the consumption as we can that of beer and spirits, but one of our leading makers admitted that his trade was doubled in twelve months after the agitation began, and that in a few years he was doing eight times the trade he had done previously. Again, whereas ten years ago, the demand was all for pot fruit, now the demand for cider and perry kinds is equal to and promises to exceed it. That is my own experience, and it was confirmed only the other day by a well-known County Council lecturer who travels about the country a great deal, and has exceptional means for forming a judgment. The County Council, by means of the lecturers and the Technical Committees, have done a great deal to help the movement. Recently there has been such a demand for cider and perry fruit trees that the English nurserymen cannot supply it, and if you give them a large order they are obliged to send to France before they can fulfil it. In France the people pay more attention to such trees than we do, and I have seen there better nurseries than we have in England, all consisting of trees bearing fruit for the cider mill."

I may remark in this connection that from subsequent inquiry I learn that those who are planting on a large scale now go direct to France for their trees, the English stock being apparently exhausted or non-existent.

THE PROGRESS OF PASTEURISING.

Mr. Cooke went on to say that it was his wish to restore the old varieties of English fruit. A hundred years ago or more cider and perry made from special varieties fetched fancy prices in the market, and no doubt this state of things could be revived. He then took me to see his grand old stone crusher, and the people who were assiduously bottling and wiring the contents of several great vats filled last autumn. Mr. Cooke had much to say concerning the merits and demerits of modern machinery, and the effects of Pasteurising. Pasteurising consists in raising the temperature of cider to a hundred and forty or a hundred and sixty degrees, so as to destroy the ferment, and thus arrest fermentation. It is not altogether satisfactory in the opinion of many practical experts, and for my part I always imagine a disagreeable taste remains after either cider or milk has been subjected to this treatment.

THE QUESTION OF CO-OPERATION.

I next jogged on through a land of pleasant and smiling orchards to the quaint town of Ledbury, and afterwards to Hereford, the Metropolis of the cider trade. Mr. Cooke went part of the way with me, and incidentally spoke about co-operation. Co-operation is no universal remedy, and in some cases there is no need for it. There is in Wiltshire, for instance, a man who farms 18,000 acres. It would be absurd to ask him to join in with a neighbour who works 150 acres. He can operate on a large scale without

any exterior help whatever, and from his own resources produce a regular and uniform supply. Those well-known Hampshire farmers, the Messrs. Stratton, are precisely in the same position. If, again, a farmer is near a town, and has a good market for milk, in ninety-nine cases out of a hundred he thrives and makes money. Why, he asks, should he trouble to co-operate with anybody? Indeed, any man who is prospering to the extent of deriving a comfortable livelihood from his calling, will be well advised to take the goods the gods provide and be content. But there are many hundreds of farmers who cannot grow corn or beef to advantage, who have no market for milk, and who are being slowly starved out of their business. These are the people who are bound either to reconsider their methods, or see all chance of returning prosperity slip from their grasp.

SMALL HOLDERS.

Working together is perhaps a better expression than co-operation, and something of that kind may be arranged even as regards cider. One of the partners, for instance, of a very well-known firm took a view exactly opposite to that of Mr. Cooke with regard to the farmers. He perfectly agreed that a farmer might with advantage make for his own consumption and that of his hands; but he held that without giving far more time than he could really spare from his farm, he could not produce the quality of cider required for commerce. "It won't travel," he said concisely. "Of course, if a man produces a special brand by all means let him go on doing so. He will have his own special market, but

the average farmer makes the average farmer's cider, and it is not good enough to sell well. Far better is it for him to join with his neighbours and sell his surplus apples to those who make a speciality of cider producing."

Again, as far as small holders are concerned, apples may be treated exactly as eggs are. That is to say, the method of getting them sold at a minimum of trouble and with a maximum of profit, is to be achieved by one of the shrewder and more advanced farmers collecting the fruit of his neighbours, and contracting for it all with a cider manufacturer. He will make profit enough to repay him. The owner of a few trees, who probably could not have managed to sell his small quantity of fruit at a price that would have recompensed him for the expenditure of time and energy, obtains what is practically found money.

EFFECTS OF DIFFERENT SOILS.

Of course, the question most directly affects the cider districts, since the quality of cider apples seems to depend far more on soil than on the special description of fruit. Because the Fox-whelp apple produces magnificent cider on the Herefordshire clay, it by no means follows that a similar result would be obtained if the same tree were transplanted to the light land, with chalk subsoil, on which thrive the fruit plantations of Methwold, in Norfolk. A Goff in Kent is not the same apple as a Goff raised from an exactly similar tree in Yorkshire. But still a demand for fruit in one district reacts on another. If the ciderist has to compete with the jam-maker then the grower will reap the advantage.

There is, however, one necessary preliminary, and that is a root and branch reform of the orchards. Even in Herefordshire, and much more so elsewhere, the farmer has failed to recognise that in apples as in wheat a good return is dependent on culture, and that the hit and miss character of the crop—three famines and a bumper—is largely due to lack of manuring and attention. A very large number of the trees should be grubbed up, and replaced by saplings of the right sorts. If this be true of a cider county, it is practically so of other districts. Farmers have treated orchards not as if apples were a crop dependent like any other on their labour and exertion, but as if they arrived at maturity by some mysterious process over which there was no control. No doubt this would be altered quickly enough if arrangements were made for the regular collection and sale of fruit every autumn.

THE JAM-MAKER AND THE CIDERIST.

Someone is needed to do for apples and pears exactly what Miss Smith-Dorrien is doing for eggs. It would benefit the cider industry too. The manufacturers I have heard remark invariably that they have not the slightest difficulty in selling their "make" right out, and that they would be glad to enlarge it were it not for the scarcity of apples. Between the jam-maker and the ciderist, therefore, it would appear that the small holder who takes up apple and pear growing is perfectly sure of a market. What keeps him from embarking in the venture is no doubt simply his own unsettled mind. It takes years to bring apple-bearing trees to maturity. If the small holder does not care to move townward

himself, he is, nevertheless, aware that it is the goal at which his children are aiming, and so he has no heart to work for a future so doubtful.

POSTCRIPT.

Since writing the above I have had an interesting letter from Mr. Radcliffe Cooke, of which I extract what is pertinent. After stating his objection to "the trade getting into the hands of a few big men, who may combine and practically become monopolist, and beat the farmer down in the price both of his fruit and cider," he goes on: "If farmers would only make a few hogsheads of 'clean drink,' as we call it, that is, cider or perry made without any addition of water—pure juice only—in a proper manner, paying attention to perfect cleanliess of casks and utensils, and watching the process of fermentation so as to keep the sweetness in the liquor, they would be able in the spring, when the large manufacturers are busy bottling, and running short of cider and perry of their own make, to command a good sale. There are many who do this now, and get a shilling a gallon for it. I heard of one farmer in the next parish who had sold several hogsheads (our Herefordshire and Gloucestershire hogsheads hold from a hundred to a hundred and ten gallons) at that price. Many have a vessel of draught cider always on tap. This they get as a rule from farmers."

CIDER.

Mr. Fred. G. Farwell, Steward of Cider Showyard, Exeter, wrote :—

"Without in the least wishing to detract from the very valuable service Mr. Radcliffe Cooke has by his advocacy rendered to the development of the cider industry, as so well described in your interesting article in the *Morning Post*, I regret to find that no mention has been made by your Commissioner of the work done by the Bath and West and Southern Counties Society. Since 1894 this Society, aided by special grants from the Board of Agriculture, has been conducting experiments with respect to the making of cider at Butleigh Court, near Glastonbury. Thanks to the hearty co-operation and most valuable assistance of the Squire of Butleigh, Mr. Neville Grenville, a remarkable advance has been made in the improvement of cider. This more especially applies to Somerset, for Mr. Neville Grenville is only too pleased to give every facility to any one interested in the industry to inspect the methods adopted for making cider there, and many farmers in the county have taken advantage of this. The results are markedly demonstrated in the present Show. Not only has the champion prize, open to all counties, gone to Somerset, but the whole of the Somerset classes were pronounced by the judge—a Devon man—to be not only of an excellent, but also uniform quality. Recently a Somerset farmer told me that since he had been to Butleigh, and adopted the methods of manufacture there, his cider had increased in value to the extent of 25 per cent. While he had previously obtained only eightpence per gallon for his cider, he has now a ready sale for it at a shilling a gallon. As his output was nearly three hundred hogsheads a year, this practically means the rent of a farm."

In many other counties the making of cider has made an enormous advance. Witness its successful revival in Kent and its extension in Norfolk. I selected Mr. Radcliffe Cooke not as the only, but as a representative, leader in this excellent movement.

CHAPTER XVIII.

Reading and the Lady Warwick Hostel.

Of all the people engaged in agriculture it is probable that the brightest and most hopeful at this moment is the farmer's daughter. Ten or twelve years ago, when it was first being realised that depression had come to stay, it was usual to point the finger of reproach at this interesting person. In his palmy days the farmer had spent much money to make his girl a lady. She was smartly dressed, she could play the piano more or less skilfully, she knew a little French and German and botany, and altogether she was no bad copy of the young lady at the Hall. Old-fashioned folk said: "That wasn't how her grandmother made money. My word! She had her bunch of keys at her girdle and either a basin of poultry food or a broom in her hand. She was an expert at cooking and making preserves; and the cows, hens, turkeys, geese, pigs, and chickens were as much to her as her babies. But the daughter, why she is only an animated fashion-plate." It is no longer possible, with any degree of justice, to describe the farmer's daughter in that way. She has risen to the occasion as no one else has, and promises to be the saving factor in the situation—a good reason surely for considering her case.

A short time ago I was speaking to an intelligent girl of thirteen. She is the daughter of an Essex farmer, and goes by season ticket to an excellent suburban school, where she keeps head of her form and wins all the distinctions possible.

"You will have to become a writer," I remarked to her in jest.

"If I was ever so rich I'd like my daughters to be able to earn a living at a pinch," said her mother.

"Oh, I have made up my mind what I am going to do," said the daughter; "when I leave school I am going to Reading College and coming out as a dairy expert."

It was all the more pleasant to hear this because her school companions are decidedly of the town, belonging to families of well-to-do city people with very different ideals. Yet she was exactly typical of her class. Into whatever part of the country one goes the same thing is heard about the girls—they are enthusiastic about country life. Whether they are in Hertford or Essex, Wilts or Gloucester, Yorkshire or Northumberland, they are keen to learn all that appertains to the farmhouse. But a dozen years ago they were perfectly indifferent to rural charms or hated the country. What has produced this remarkable change? Professor Gilchrist, the able head of the Agricultural Department of Reading College, talking it over when I was there, said it was because a beginning had been made in the right way—namely, by rousing the interest of the girls. They were not solemnly told to return to the ways of their grandmothers, and carry their butter and eggs to market, and learn to haggle over a farthing.

The old humdrum occupation was suddenly trans-

figured by new light. To make the best butter, for instance, is a clean and beautiful scientific operation, and altogether the treatment of milk is a matter of skill and knowledge. Again, the girl is being told that it is foolishness to make only a few pounds of butter, and carry them for sale to the nearest market—a thing which educated and cultivated farmers' daughters would not do. The great essential to success is to work on a large scale and to contract for large quantities. All this seems to open up a new career. If you consider the many different kinds of feminine employment there are few to be compared to that in connection with a dairy. The winning of the girls for this work is a great point gained in the revival of agriculture. It is very pleasant at Reading College to see them, not always listening to lectures nor working from books, but actually engaged in the hard labour of their calling. They make the cheese and the butter, and not only so, they wash and scrub and clean up afterwards, looking all the time none the less pretty in their white overalls.

FUTURE FARMERS' WIVES.

On poultry, too, they find that science is shedding the light of keen interest. Attached to the college is a model fattening room kept beautifully clean and wholesome by a free use of broom and disinfectant. Placed round the wall in their cages are the fowls, bright eager birds that seem to take a vast pleasure in being crammed, though one would think a pullet of intelligence would regret that the pleasure of eating should be entirely abolished, and in substitution a fixed quantity of food be pumped into the stomach

at intervals. This pumping, with all the necessary examination of the crops and so forth, is done by each pupil in turn under an experienced eye; and in another room the birds, whose fattening joys are past, are killed, plucked, trussed, and made ready for market by the girl-students; while in a third place they test, grade, and pack eggs for market. But I fancy the system of packing taught is somewhat clumsy and elaborate for large quantities. Most of this practical work is done in the morning. During the afternoon the lecturer discourses on points of theory. When I was there he was explaining the advantages of the incubator, but at the same time vowing most solemnly that he did not wish "to dethrone the broody hen."

In answer to an inquiry as to the ambitions, objects, and ultimate career of these young ladies, I was told that some become teaching experts under County Councils, others seek to obtain the management of dairies, and for my own part I hope that not a few will fulfil the best distinction of all, and become wives to farmers. That is probably the position in which the knowledge and skill they are acquiring would prove of most practical service.

Before leaving the point it may be as well to say that there is a considerable advantage in studying agriculture at a college like Reading, which is chiefly a seminary for the teaching of art, science, and literature. It is a daughter of Oxford, and the maternal traditions are over it, so that besides their technical acquirements, the students must carry away a tincture of broader culture. But the college is lucky in having excellent connections. Since 1895, when the Dairy Institute was brought here from Aylesbury, it

has been in close touch with that practical body, the British Dairy Farmers' Association. The Institute is now managed by a joint committee of collegians and dairy farmers.

The Royal Agricultural Society also elects several members of the General Committee, so that the influence of all the agricultural wisdom of England can be brought to bear on the college. Along with the various independent colleges, such as those at Downton and Cirencester, Reading is doing good work towards preparing the younger generation, on whom must devolve the care of the future. When the rural districts become permeated with dairy experts from Reading, and lady gardeners from Swanley, and lady bee experts examined by the British Beekeepers' Association, one would think they should once more become attractive to the youthful rustic, and at any rate their resources will be more intelligently developed.

THE LADY WARWICK HOSTEL.

I do not know if the Lady Warwick Hostel is possessed of much agricultural importance, but it is an interesting and a pretty experiment. The so-called hostel is a large house in the Bath Road, the fashionable west end of Reading. It was built originally for private use, but was afterwards turned into a school. Now the Countess of Warwick has taken it on a five years' lease for her hostel. Her notion is that there are numbers of young gentlewomen, not absolutely poor, but with the wise man's prayer fulfilled, "Give me neither poverty nor great riches," who would like country life, and would be glad of an employment that would at the

same time be interesting, and yield an addition to their income. She has certainly gauged the wishes of a class. There are only fifteen bedrooms in the house, and already twenty-seven students are admitted, so that it will hold no more even after the larger rooms have been divided into cubicles. The place puts one oddly in mind of a nunnery, with the severe religious exercises and penances, the austerities, and all the unpleasantness left out. The house, with its great garden, and a gardener who might have walked out of the pages of Bocaccio, has a curious air of seclusion. There is no "tinkle of the vesper bell or sisters' holy hymn," but the fair devotees of country life, who are, as a matter of fact, very frank looking and rosy English maidens, are diligently exercised in all the arts that are or should be practised in Arcadia. Each works partly for her commonweal, which is the hostel, and partly for herself. In the tool-house she has her own agricultural implements—not toys as you might fancy, but good sound and moderately heavy spades, hoes, and rakes. She has also her own little garden plot, and is proud if her beans are half-an-inch taller than her neighbour's, or if her early peas have escaped that bane of good gardening, the sparrow. In the greenhouse she has her own shelf and her own crocks, wherein seed is raised and the young plants most neatly pricked out. She has also her own slip of vine and plant in the hothouse, and has her share of work in the mushroom beds, which are producing bountifully.

Then to multiply these pleasant little cares there are many live creatures in the garden—a chicken run, with laying and sitting hens and tiny poults to be looked after, a little colony of ducks, and no end of rabbits in

hutches. If it be remembered that all the while the girl is keeping abreast of her studies at the college, it will be realised that there are few moments of her time without their allotted task. Yet though she is full of employment she is not pressed, and probably many of the students will years hence look back at their days in the hostel and think them the happiest in their lives. One could almost wish they were like the children in one of the Wonderous Isles where Time is laid under arrest and nobody ever gets any older.

Unfortunately, there is no enchanted hostel in our unromantic day, and one cannot help wondering what these maidens intend to do with themselves when they are utterly perfect in the mystery of planting cabbages and expert beyond belief in the management of ducks and hens. Lady Warwick herself entertains large expectations, which, no doubt, are to some extent justified. I suppose a proportion, large or small, of these girls will undergo the usual fate. Educate women for what purpose you please, and map out the future for them as carefully as if it were to go in a Government survey, Love steps in at the end and upsets all the plans.

UNMARRIED LADIES.

Still there is a residue, and one that tends to increase in the very class referred to, of well-born women who are not so well off as would seem appropriate to their station, and who in many cases pass unwedded lives. We may suppose them established near a village and working at *la petite culture*. They certainly cannot do the hard work—no woman can without sinking into the

position of a drudge. Of course, as Miss Edith Bradley, who is an efficient and in every respect an admirable Warden of the hostel, explained, they are in no case penniless, but would be able to afford to pay for having the hard work done. It is just in this paying that the interest centres, because previous experience goes to show that the only people to succeed are those who work themselves. Let me take a case in point. An acquaintance of my own, who has private means and also makes about £400 a year by literary work, has a hobby for gardening, at which he is uncommonly clever, as far as growing things is concerned. Yet he tells me that he regularly loses on his market-gardening all that he makes from his books, and at the end has to live on his private means, the one hobby exactly supporting the other. Still, he is one of the Old Guard, and takes no trouble to master the modern methods.

CO-OPERATION.

Perhaps the ladies will be able to acquire at college far more profitable methods. If they can live themselves one can see a hundred ways in which they will be of invaluable service to their neighbours. They are, for instance, the very persons to catch up the idea of co-operation and to organize those of the same calling, so that all within a given district who are engaged in producing the same articles, whether these be poultry and eggs, or fruit and fresh vegetables, rabbits or cheese, may join together, and by sending their produce regularly, and in large quantities, at once secure the lowest railway rates and command the best markets. As helpers and recruits to Miss Smith-Dorrien, for example,

they ought to be of priceless value. In forming and working large butter factories they may also perform the greatest service. It need scarcely be added that indirectly they are likely to exercise a great educative influence. After all, the best teaching possible is to do things well and profitably, and set an example that is worth the while of anybody else to copy. Having thought over all these things, one is inclined to be glad that Lady Warwick's scheme has received so warm a welcome, and to hope for much from the pupils of Miss Edith Bradley.

CHAPTER XIX.

Education and Agriculture.

THE following letters on education were written by special correspondents of the *Morning Post.* Various references to the same subject will be found in this volume. It is no longer controverted that the young farmer to succeed must study scientific husbandry, and that it is advisable for him to do so at one of the many colleges existing for the purpose. His wife will be a better help-meet if she has mastered the work of the modern dairy, and had instruction in poultry-keeping. Further, interesting and profitable careers are open to young women who qualify themselves to be dairy experts, lady gardeners, or even lady bee keepers. But apart from these specific instances, there is a general feeling throughout the country that our elementary education in most districts is not sufficiently practical in its nature. The school should be a preparation for work, but at present it certainly offers no preparation for the work of the fields. In Denmark, as our first correspondent shows, the foundation of ultimate agricultural success is laid in the elementary school.

LETTER I.

"The Danish butters, like Opie's colours, are good,

because 'they are mixed with brains, sir.'"—Mr. J. S. Thornton's Special Reports on Education subjects, Vol. I.

The conviction has been growing on the English people that if we are to maintain our position among the Nations of the world we must reconsider our educational methods. But the pity of it is that a large number of our leaders in commerce and industry insist on regarding the accumulation of facts or the acquisition of manual skill as the sole end of education. Hence the great movement in favour of increased facilities for Technical Education has merely led to the encouragement by the State of the teaching of those special subjects which are of direct use in the pursuit of various occupations. It may be said, without the least hesitation, that the premature specialisation which is thus enforced bids fair not only to fail in the object which it is honestly conceived to meet, but to undermine that strength of character and foundation of sturdy common-sense to which most of our past success in commerce and industry has been due. Every educationist recognises that we are passing through a national crisis—all the more serious that it is of a nature which is not to be perceived by all observers—and regards with dismay the tendency to develop along lines which can only lead to disaster.

EDUCATION IN DENMARK.

That patriotism is false which refuses to admit that the foreigner can teach us anything. It has, however, become alarmingly widespread in recent years. In

matters educational more than one great thinker, proud of the achievements of England, and persuaded of the incomparable strength of the English character, has been branded as unpatriotic because he has attempted to point a moral from the educational progress of foreign nations. That the disciples of these men have in no way departed from the work which they initiated is an additional proof of the stubborn persistency of Englishmen in the support of right when they have once clearly seen it. In a report, for example, on "Recent Educational Progress" in Denmark, from which the above and other quotations are taken, Mr. Thornton draws attention to the fact that the present agricultural prosperity of the Danes is to be traced to what may appear a mere detail to many persons, but what is, nevertheless, one of the fundamental truths of education—a truth which has been unceasingly preached in this country by all writers speaking with authority.

DANISH SYSTEM OF HIGH SCHOOLS.

In an address at the Oxford Summer Meeting of 1894, which excited a good deal of comment at the time, Mr. Alfred Poulson, President of the Association of Danish High Schools, said, in connection with the question of Danish butter: "The greater part of the men and women who manufacture this butter are pupils of the High Schools."

On these People's High Schools the State has since 1892 spent over £16,000 yearly. They consist of "sixty-five adult boarding schools or residential colleges, attended by students of the peasant or yeoman class for the most part, the greater number between the ages of

eighteen and twenty-five, though many are still older." At most of them the men attend in the winter and the women in the summer. "There are besides these sixty-five People's High Schools, five Agricultural and two Horticultural Schools on similar lines, as well as seven schools which are partly High Schools and partly Agricultural Schools. At these seventy-nine schools there must be over six thousand men and women from humble homes receiving instruction every year. . . . At the Agricultural Schools the better half of the students, those who seize most completely and apply most readily what they learn there, have first been students of history and literature in the ordinary High School."

From this short description a general idea of the system may be gathered, but it is the spirit which underlies or is rather the motor force of this system which accounts for its success.

THE EDUCATIONAL SPIRIT.

It is interesting to notice that this spirit was inspired by the England of 1830. Bishop Grundtvig, who started the idea of these schools in visiting England about this date in the pursuance of literary studies, felt that something more than books was needed to give the Danes that energy and activity which he noted among our fathers. To the superficial observer there may not seem to be a very close connection between the educational principles which he laid down and the successful manufacture of butter! But it is a connection which we should do well to appreciate. Among the teachers in the High Schools, he says, there ought to be at least one who was "a master of the mother

tongue, not only as it is found in books, but as it lives in the Nation . . . at least one who knows and loves our Fatherland's history, and is able to picture it vividly in words . . . at least one who knows and loves our national songs . . . at least one who has seen much of our Fatherland . . . and one who could give the youth a true and living apprehension of our Fatherland's Constitution and laws formerly and now." The staff of masters here proposed would have created National Schools in the truest sense. The attitude of the Church towards education in Denmark is instructive. A Bishop initiated this movement, and theological students have continued it to a successful issue.

CURRICULUM AND FEES.

The chief feature of the teaching in these schools appears to be lessons which take the form of conversations. Thus we find conversations of an hour's duration in physics two days a week, universal history two days, history of the North three days, and Bible lesson one day. The other subjects taught in a typical High School are historical geometry (to be carefully distinguished from the series of *pontes asinorum* in our schools), statistics, gymnastics, singing, Danish, English, geography, book-keeping, and arithmetic. The expenses of a student for six months at any of these schools will be covered by £12 or £13, including apparently every possible need (even tobacco), with the exception of dress. But in spite of the lowness of these fees, "the poorer half of the students readily obtain through the County Council a bursary that covers one-half their expenses."

EDUCATION—NOT INSTRUCTION MERELY.

It will thus be seen that the Danes distinguish between education and instruction. It may appear a paradox to the uninitiated, but instruction in the principles of butter-making is by no means the first requirement for the promotion of the butter industry. But yet that is the principle which we have applied to Industrial or Commercial Education in England. The Science and Art Department, for instance, is always ready to bestow grants for the encouragement of the teaching of special subjects to boys and girls as soon as they have left the Elementary Schools. The Danes have grasped the fact that even dairy and egg farming need before everything else intelligence, and the whole of their educational machinery is directed to the training of that intelligence and to the fostering of a healthy patriotism, which is one of the greatest incentives to a desire for knowledge for its own sake.

WHAT WE SHOULD DO.

Shall we in England adopt similiar measures? Will the proposed Board of Education and the Consultative Committee lead us to a higher appreciation of the aims of education than has characterized us in the past? Unfortunately there is a strong feeling in this country in favour of seizing on the boys and girls as soon as they leave the Elementary Schools and drilling them into commercial and industrial machines. Not only is this in direct antagonism to English traditions, but it will undoubtedly eliminate that power of individual initiative which is essential, even in the minutest details,

to the success of any branch of human endeavour. The most pressing national need is the revival of Agriculture. Will the clergy in our rural districts lead us, as their brethren led the Danes, in bringing about this revival by the only infallible means—by founding Continuation Schools for the rural population which bestow an education whose first object is the training of the intelligence; an education which should be obtainable by the working men and women not only at hours when they should be resting from the labours of the day?

LETTER II.

The question as to how far education should be submitted to popular control is one which is causing great diversity of opinion at the present moment. No one will dispute the power or right of the people to demand educational facilities in proportion to the resources of the State, but whether the public, as opposed to experts, are capable of deciding how the quality of education should be adapted to modern needs, may well be doubted by those who watch the transformation of our curricula in response to public pressure. To take one example, the technical skill of the German workman caused a popular demand for Technical Education in this country. But was it the weakness of their Departments presiding over the education of the people, or the strong will of the public that was responsible for a system of Technical Instruction which ignores the need of that basis of sound, general education so well understood in autocratic Germany? In short, the English public is as yet incapable of perceiving more than one of the aspects of education at a time, and the only

conclusion is that the interests of the Nation will be best served if the people insist on the attainment of certain definite results by our schoolmasters, but leave it to the experts to decide by what means these results can be best procured.

THE COMPLEX AIMS OF EDUCATION.

The aims of education are so complex, so intimately connected, and interdependent, that undue attention to any one of momentary importance may not only defeat its own end, but lead to the neglect of others of permanent value. Thanks to the excellent information published by the special Inquiries Branch of the Education Department, attention has been drawn recently to the part which education has played in the agricultural success of Denmark. It was shown that no real revival of agriculture will take place in this country until we lay greater stress in our Rural Schools on the training of the intelligence. But while the present popular tendency to regard the accumulation of knowledge as the first object of education must be strenuously opposed, it would be equally fatal to the interests of teaching to consider the training of the intelligence as the sole, or even the most important function of our schools. It is possible, however, that when we have a Consultative Committee of experts the consideration of the peculiar conditions affecting the decline of agriculture may lead our Departments to a higher appreciation of aims of education, to a fuller recognition of the principles governing the physical, mental, and moral development of man that have characterized our Codes and Directories of the past.

THE ATTRACTIONS OF TOWN LIFE.

Of the forces which militate against the revival of English agriculture those do not concern us here which legislation might or might not eradicate without impairing the strength of the whole Nation. But there is one which education might do much to counteract, and that is the attraction of town life for a large section of the rural population. This attraction to each individual varies directly in strength as his ignorance of the economic conditions which govern national progress—an ignorance which is often accompanied by a moral weakness that is powerless against the allurements of the streets of our large towns. Now, while the very nature of our Constitution makes it impossible that education should be regarded, as in some other lands, as a legitimate instrument for moulding the minds of the people to the views of the governing classes, the enlightenment of ignorance and the imparting of moral strength are two of its highest functions.

THE VALUE OF INTEREST.

To earn a living is the primary object of most workers, but man does not live by bread alone; and while it is undoubtedly one of the duties of Education to prepare men for bread-winning, it has also the higher duty of inspiring them with the power of obtaining the greatest moral benefit from the performance of their work. A worker of trained intelligence may prove a satisfactory producer of wealth, but one who also loves his work, and regards it as a means for realising all that is best in himself, is the highest type of citizen. It will,

therefore, fare ill with the Nation if in reforming its education it does no more than substitute, as a preparation for Technical Instruction, the training of the intelligence for the accumulating of knowledge. It is extraordinary how apt people are to forget in discussing educational problems, that if good workers are to be raised up, it is necessary, first of all, to foster some propelling force which will urge them to overcome the inevitable obstacles in life. There is a famous school of German philosophers who claim that the main object of education is the arousing of interest. Though this may be only a partial truth, yet interest is certainly a propelling force, if not the source of all forces of the kind; and if the result of our education were only to arouse a keen interest in the pupil's future surroundings, it should indeed have accomplished much. The agriculturist's love of his work, for instance, must depend on his interest in Nature. It should be easy enough to arouse such an interest in rural schools; and interest in Nature, leading to the discovery of the benefits of living in close contact with Nature, would not only make a better worker of the agriculturist, but would strengthen him morally against, at any rate, the baser attractions of town life.

SCIENCE IN TOWN AND COUNTRY.

Such an interest would be best aroused by the teaching of science in the Elementary School, not by reference to coloured plates and printed formulæ, but from the great object lessons going on in the fields around; not that science which fills narrow minds to the exclusion of literature, but that which is illuminated by the

poet's fancy and wooed by the imagination. A country child should know something about the weeds and flowers of surrounding field and wayside, the names and habits of common birds and beasts, something of insect pests for use, and something of moths and butterflies for pleasure, something of the life of ponds and rivers, as much as is clear and simple of the processes of Nature. The agriculturist, unlike the artisan, will never separate Nature and science in earning his daily bread. The artisan in our towns uses the force of Nature without necessarily coming into direct contact with the great generatrix. These forces have been wrested by science from Nature, stored by man in machinery of his own invention, and placed at the disposal of the workman in a form from which all the æsthetic and moral influence of Nature's inspiration have been eliminated. Rarely is he reminded in his daily work that man is dependent on Nature; if he ever thinks of her it is rather as a handmaiden obedient to his beck and call, to minister to wants of his own creation, and to assist in her own effacement. With the agriculturist it is quite otherwise. He lives in direct contact with Nature, and he is dependent on her for the success of his bread-winning. Science is of service to him only in so far as it enables him to aid her in overcoming the obstacles which stand in the way of the highest development of her own productiveness. Can it, then, be difficult to teach science to the young agricultural labourer in such a way that it will give him a lasting interest in Nature, and a love for his work which will form an adamantine breakwater against the tide which flows townwards?

ECONOMIC CONDITIONS.

But so far we have only considered the necessity of arousing interest in the immediate surroundings of daily life. There is also an outer circle of environment of no less importance—that which we may term national life. To educate a child as an isolated individual, or even as a member of a small community, would not satisfy modern requirements. He must be brought up to play his part as a member of the nation. His interest must be aroused in the economic laws which affect national progress. This may be best attained by the teaching of history, and even before leaving the elementary school he may have discovered some of the responsibilities of the agriculturist with regard to the maintenance of our national supremacy. An additional influence will thus be established against the attractions of town life. Interest in the welfare of the nation will engender a patriotism to give the highest motive to his daily work, and ignorance of the conditions of wage-earning in our cities will no longer lead him to desert his village, "to see profusion that he must not share."

RURAL TEACHERS.

But it is evident that the concatenation, of which a faint outline has been sketched, cannot be carried on without efficient teachers. This fact suggests the fundamental weakness of our system. Rural School Boards offer poor testimony to the virtues of democracy, and, speaking generally, the best work in country districts is done by Voluntary Schools. But, unfortunately, the funds at the disposal of the latter are so inadequate that

the State cannot insist on the proper efficiency of the teachers they employ. Our first duty, however, is to provide the most highly-trained teaching in our rural schools. If the country people are unwilling to help themselves the State will either have to become responsible for the maintenance of existing Voluntary Schools, or found other institutions under more satisfactory control than that of the School Boards. It is to be hoped that the Nation in its present prosperity will not shun the difficulties that confront it, and, above all, will not allow itself to be further deluded into the fatal compromise of offering technical instruction to half-educated children. The advance of a modern State in civilization may at present be measured by the extent to which it has brought secondary education within the reach of all classes of the people.

CHAPTER XX.

The Duke of Portland's Theory.

THAT Agricultural Shows have been of immense service in improving the breeds of cattle, horses, and sheep, and in giving the farmers a notion of what ideals to keep in view is indisputable. Since about 1736 up to now, the showyard has been most beneficial in the way of bringing to the front the breeds that are most suitable to the farmers' ends. But like every other good institution it is capable of abuse, and it has brought into being a curious nondescript, who, without knowing much of practical agriculture, has mastered the art of winning prizes. It is true that such beasts as his never are to be seen even on the best farms, nor is the overfeeding, pampering, and grooming with which he prepares them any part of the routine of agriculture. His prize animals are, as a matter of fact, useless for any agricultural purpose. He is for ever neglecting utility and exaggerating "points." It is as a corrective to this bad tendency that the exhibition of the Welbeck tenants is valuable. The professional pot-hunter is not admitted, and the showyard is filled with the animals and implements that have been bred or purchased, not for the object of winning prizes, but for ordinary farm uses. The half-bred horses are for the market, the agricultural horses

are used for carting and ploughing, the milk cows are for the dairy, and the bulls are not bred expressly for points, but to become useful sires.

LONG SERVICE RECORDS.

It is this perfect homeliness that gives the distinguishing feature to the show. There is nothing fancy about it. Here is the young horse from the garth, the cow from the byre, the pig from its shed, poultry from the farmyard, flowers from the cottage window, honey and vegetables from the cottage garden. Nay, here is even the cottager himself, a competitor for the long-service prize, at the end of the day awaiting, as it were, the "Well done, thou good and faithful servant" of his employer. He at least is no made-up figure or imagined being, but labour-worn, furrowed, bearing on his face the imprint of age and toil. I remarked to the Duke of Portland on the fine record the first prize-winner had in 1899—forty-four years and eight months of service to the same master—his name is Henry Broad, and that of his master Robert Eyre, of Cresswell. But his Grace only smiled, and told me that the previous year's winner had a much longer record—sixty-six years of continuous service to the same master on the same land. For long service on the estate, as distinguished from the farms, the winner in 1899 was one who had toiled for sixty years on the road. "If the rude forefathers of the hamlet" could be stirred out of their unending sleep, I doubt if any of them could show a much better record. Sixty-six is a good slice out of the allotted span of three score years and ten. The rugged, strong faces of the farmers correspond with those of their servants. They do not look the

sort of men to sport kid gloves, and to make farming an elegant amusement. On the contrary, they have the tanned skin and strong limbs of those who can handle a pitchfork themselves on occasion. The idea of this show is once a year to call up these officers in the army of peace, and to pass them and their works in review. They come gladly, for what man, having accomplished a work of which he is proud, will not gladly show it to others, and submit it to comparison? There may be, and no doubt is, much agricultural depression still in the country, but traces of it would be sought in vain at the show, where the women all look merry and the men prosperous, and the animals exhibited afford proof of successful effort.

THE HISTORY OF THE SHOW.

The Duke of Portland assured me emphatically that this was what he most highly esteemed the show for. It enables him to see all his people once a year at least, under conditions agreeable to them, and, what is of equal importance, to behold samples and specimens of each man's work. I need not say what a profound lover of live stock he is, but, at the same time, he literally abhors the pot-hunter and his ways, and likes to see things as they are in daily life, not groomed and coddled and doctored into artificial condition. This show, therefore, gives him just the insight he requires into his estate. Then, he added, it was a rare pleasure to meet his tenants face to face at luncheon in the Riding School. It afforded him an opportunity of speaking to them in the most direct manner. I asked him, as he was good enough to say that he had read the articles in the

Morning Post with interest, what opinion he held as to the best means of reviving agriculture. His answer was that he thought the wisest course for the English farmer to follow was to earn a name for producing only the very best of everything. It was the policy he himself had tried to pursue in encouraging these shows. With that he took the catalogue, and, turning up a table of entries, asked me to notice what changes had occurred during the ten years' life of the Society. I will give the figures presently, but, as he remarked, they do not tell half the tale, as the improvement in quality greatly transcends that in mere numbers. The Duke referred to the first foal show, out of which this exhibition originally sprung. His early intention was the modest one of offering a few prizes for the offspring of the stallions that he purchased for the use of his tenants soon after succeeding in 1879 —the Clydesdale Pure Bone and the thoroughbred Mate led the way I fancy. In 1887, the first year of the foal show, there were only fifteen entries of rather weedy foals. But every year they kept on growing better and increasing in numbers till, in 1890, the Duke was encouraged to ask the assistance of his tenants in forming the Society, which has flourished ever since. The following brief epitome of the entries in 1890 and 1899 respectively will serve to indicate what changes have been accomplished in a decade:—

	Number of Entries. 1890.	1899.
Horses	178 ...	337
Cattle	84 ...	104
Sheep	142 ...	127
Pigs	31 ...	26
Wool	— ...	19
Poultry, eggs, butter, and cheese	56 ...	320

	Number of Entries. 1890.	1899.
Brought forward ...	491	933
Honey	—	8
Shoeing smith	—	11
Block test	—	77
Butter-making	—	5
Long service	—	38
Farms	—	18
Cottage entries	—	150
Totals	491	1,240

The increase in numbers is sufficiently striking, but the Duke says the improvement in quality is even more so. And quality is what he aims at. "I tell them," he said, "that a good beast costs as little to keep as a bad one, and has a very different capital value." Though there is room for improvement, yet he was proud, and not without good reason, of the fine results already attained. Indeed, I think it doubtful if any other estate in the kingdom could show anything like the same quality of working stock. The horses especially—the agricultural as well as the half-breds—are up to a very high level of excellence. "But I still have to impress on them the necessity of keeping good mares," added his Grace—this conversation, I may mention, taking place in the enclosure where he was going to judge the half-bred colts and fillies. Volumes could not more efficiently have explained the ideal at which he was striving. And that his efforts were highly appreciated was evident when he addressed his tenants after luncheon. He has a frank, straightforward style of address, and has evidently pondered well beforehand what points require to be driven home. But all this

labour would be in vain if he had not previously captured the entire sympathy of his audience. I left him busy with the foals to ascertain as far as could be the net practical value of what he was doing for the agriculture of the district. One or two points I shall touch on as they occurred.

CONCERNING DAIRIES.

One of the first persons with whom I got into conversation was a young gentleman in charge of the stall of the Midland Dairy Institute—one of those clever, well-informed lads whom the various agricultural colleges are turning out in welcome numbers. Among other things on show was some beautiful butter done up in one pound packages. He told me it was sold at fifteen pence a pound. The Institute people make 100 lbs. every day, and dispose of it easily, partly to private customers, and partly to shops in the towns of Nottingham, Derby, and Buxton. The cows employed were Shorthorns, and it took about two and a half gallons of milk to make a pound of butter. They found it very profitable to fatten pigs with the skim milk. Milk was supplied by the farmers, who were paid sixpence a gallon for it, and he held that wherever milk could be obtained at that price butter factories could be carried on at a profit. But is this so? Farmers in Essex only get fivepence, and vow that it would never pay them to make butter. Some time ago there was placed in my hands a letter—an ordinary business letter—sent in the ordinary routine by a firm of Dorset milk contractors to a customer. They reckoned that it took seventeen gallons of milk to make six pounds of butter, and they worked the figures out as follows:—

17 galls. of milk at 5*d.* a gall.—85*d.*
6 lbs. of butter at 9*d.* a lb. —54*d.*

"The skim milk," they said, "we sell, if possible, at 12*d.* Thus we find that 12*d.* added to 54*d.* gives 66*d.*, which, subtracted from the cost of the milk, leaves a deficiency of 19*d.*, to which must be added 6*d.*, which is the very least it costs us to separate, making a dead loss of 25*d.* on every churn."

One comes across strange contradictions in this business. The Midland Institute man seemed to think the butter-maker had a fortune within his grasp if he lived where milk is to be had at fivepence a gallon. Neither he nor anyone that I found carrying on a butter factory successfully, ever sell it at ninepence a pound—fifteen or sixteen pence is a price usually obtained. The complexion of the case would be entirely altered if the six pounds of butter were sold for fifteen pence a pound.

The moral is that we cannot successfully compete with the cheap uniform foreign butter, but that it pays to make a very high quality. What the Duke of Portland said about the horse applies to butter also—it is only the best that pays. If it comes to mere cheapness the foreigner can beat us easily. My acquaintance at the stall gave me an interesting description of the manner in which the Danes produce uniformity—a method now being adopted in England also, viz., by pasteurising and then innoculating with living organisims. The method is also applied to cheese-making. Not far off another expert sat in judgment on the dairymaids, who were competing for the butter-making prize. Interested crowds gathered round both, and it was easy to see

that they too were having their minds opened to the advantages of that superior dairy management Sir Frederick Milner eloquently recommended. So far we have only begun to appreciate the importance of the matter; both our methods and our material need great improvement before we can possibly be able to cope with our foreign rivals.

EGGS AND POULTRY.

In 1891 the farmers made seventy-two entries of poultry, and in 1899 no fewer than 208; in 1891 the labourers entered nine, and in 1899 as many as 113. Besides these there were many egg classes, and also dead poultry shown trussed and ready for market. It would appear, therefore, that even in districts where poultry-rearing is not a speciality, the importance of this calling is being keenly appreciated. The cottagers were as much interested in the success of their cocks and hens as the farmers were in that of their horses. It is disappointing to find that bee-keeping does not greatly flourish in the Midlands. One would think that Sherwood forest, with its mingling of sylvan, arable, and grass land, would yield abundant pasture for the little brown workers who gather the honey, and who are never introduced anywhere except to the benefit of orchard and fruit garden. This, too, is a cottage industry, and, as wages do not run very high in the Midlands, one would think that it would benefit the peasants greatly to keep more bees and poultry.

After all this it will surely be evident, that while the great agricultural shows do a great amount of good, they leave uncovered a vast field for the estate show of farm-

stock, and I am glad to learn that the Earl of Crewe, the Marquis of Londonderry, and other large owners, are following the example set by the Duke of Portland. The show brings the great proprietor into close touch with his people. He learns what they have accomplished, and, in a manner, holds a grand review of that peaceful army whereof he is head. Anticipation of the show stirs the tenant farmer to prepare for a good twelve months beforehand, and even the sluggard may be forced to wake up when he finds that unless he does so, his isolation will make him conspicuous. Few are in a position to carry out their plans on the large scale of the Duke of Portland, but it is open to all to give the same friendly interest and encouragement, and to encourage sterling merit in the way that he does. The desire to do so is no exclusive product of wealth, but an outcome of sympathy and intelligence.

CHAPTER XXI.

Land and Light Railways.

AT Wisbech, in the Fens, there prevails a state of things in pleasant contrast to what exists elsewhere. In the *Wisbech Advertiser* for the 15th of June, there was a report, more than a column long, of the spirited competition which had taken place a few days before, when certain plots of land were put up to auction. The prices obtained were from £100 to £150 per acre. A local man remarked to me that some of the land would have been "given away with a pound of tea" some years ago. The increased value is due to an extension of fruit-growing. Some of the keenest purchasers are very characteristic of the Fens—stolid, shrewd-looking men whose figures tell of good feeding, and who despise the art of dressing. They might be mistaken for tramps at a pinch. An onlooker finds it difficult to believe that they can enter into serious rivalry with the substantial yeomen, who remind one of the better class fruit-growers in Kent. I could not rest content without interviewing one and extracting an account of his experience. In early life he followed the plough, fed himself with such slops as the wretched East Anglian wage would buy, lived in one of the hovels that serve as cottages there, and might have gone on in the old way till the day of

doom if there had not been a little plantation of raspberries in his garden. He sold the produce, and the scales fell from his eyes. In a short time he rented an acre of land and planted it with strawberries. Three years after that he was able to purchase a bit of ground of his own, and henceforth went on adding plot to plot. At first land cost him comparatively little, for it was seventeen years ago, and while shrewd men were beginning then to foresee the long depression, scarcely one realised the fact that, though corn-growing was becoming profitless, other needs were springing up in our great town population. He was not himself a man with the "gift of the gab," but yet it was easy to understand him. Never having sold a bushel of wheat in his life, he did not waste one moment in bewailing the fall of its price. In fact, he dismissed the subject in two sentences when I brought it up. "I do not trouble about corn. It never has paid nowt in my time." The grammar might not be good, but the philosophy was unimpeachable. If he had farmed in the palmy days he did not look like one to cry over spilt milk. There are many people of the same kind round Wisbech. In the number of new cottages and the demand for more, in the increase of house rent and the growth of railway traffic, are proofs that no depression exists there. Another sign of wisdom is that the growers have turned their backs on London, and are exploiting the Northern markets—Manchester, Liverpool, Birmingham, Dewsbury, Edinburgh, and Glasgow. Perhaps in time the trade may get overdone. That is the fate of all trades; but meanwhile there is no sign of it. Whenever land comes up for sale—and that is not seldom, since owners are only too glad to have the prices now realised—there

is the same scramble for it, and more than one large farm in the vicinity has been broken up and sold in small holdings. In fine, many are doing here what the firm of Chivers has done near Cambridge.

THE INDUSTRIES PURSUED.

Certain advantages are possessed by this district which, in a measure, account for its exceptional prosperity. Firstly, the soil is excellent—in formation not unlike that of Holland, to which the country bears a great resemblance in every way. I had travelled to it by way of Norwich and King's Lynn, stopping at both places. The weather was the finest in June, and perhaps it was because of the yellow buttercups in the meadows, and the yellow broom and gorse flowering by the way, that the very atmosphere seemed tinctured with liquid gold. But here the fields were all dark green. The fruit trees had lost their blossoms, and by silvery dyke and river dark green grasses and rushes drank in the sunshine. It is a country of silt and drain and windmill. In spring it produces bulbs that rival the Dutch, flowers being a great auxiliary of fruit. On one holding there were rows of raspberries, and between each two a row of strawberries, and between the strawberries and raspberries again a row of violets. Every inch of ground is utilised. The strawberries are a very important crop. They come in when those of Kent are going out, and before the Scottish crop is ripe. They are exceedingly remunerative, and have this advantage to a small holder, that he can realise on them the first year, but they yield best in the second and third year, so that there is no long waiting as in the case of apples.

Most of the fruit-pickers come from the East End, and as the season finishes, pass on to the Kentish hop-fields. Women are very much in demand. Some years ago they could be had for *1s.* a day, but now they get *1s. 9d.* I heard of one man who in the stress of last year paid *2s. 6d.* In piece work they earned still more, some of them carrying away as much as *7s. 6d.* a day. They waited to beg that their husbands might come on, too, instead of having to be content with the wages of agricultural labour. But of course this does not last long. Gooseberries, too, are very largely grown. In the height of the season it is not unusual for as much as 150 tons to be sent off from Wisbech in one night. At inn, and market, in railway trains, and wherever people meet, the talk all runs on raspberries and strawberries, and gooseberries and currants, but "tates," as they call potatoes, figure largely also. Yet a railway official, who has been seventeen years in Wisbech, tells me that when he arrived there the traffic was nearly all wheat. He showed me the wharves on the Nen for loading it for transfer to the North. But the granaries now are occupied by a great manufacturer of mustard, that, too, being a notable product of the Fens. How different it all is from the day when Hereward fought his way down here amid dank river grass and weed! Yet the people of the Fen retain all their own energy and go, and some of the elder women especially, with grey hawk eyes and figures all nerve and movement, are not unworthy of their ancestors. As one of them said, the only difference is that now when the people take the ague—the bane of Fenland—they call it the "infilluenza."

THE TRAM LINE.

In view of the many schemes now afloat, it is certainly of importance to ask what part in the development of the district has been played by the light railway that runs from Wisbech to Outwell and Upwell, a distance of over six miles. Before it was made the people had either to drive their own goods to market or to send them by the carrier, and in either case it was a day's work for them. If they wished to send goods to a distance there was cartage to pay, or the river could be utilised. Now, to take these facilities in succession, the people have only to carry their fruit or vegetables to one of the depôts, and at a very small charge it is promptly transported to the town. Instead of starting themselves in the early morning they can run up to market for threepence or fourpence after the day's work is done. The majority go up about seven at night. Comparatively few people could afford the time and expense of driving, but in 1898 the line carried 119,000 passengers. Goods for a distance are loaded into a truck at one of the depôts, carried up to Wisbech, hooked on to the ordinary traffic, and carried without further trouble. As to the waterway, it has ceased to attract traffic of any kind. Sending by barge always involved transfer, and this at once caused delay and added to the expense. It would be the same if they had a narrow gauge line. With a full gauge the railway company can run an ordinary truck, which need not be unloaded till it reaches its destination. Another advantage struck me forcibly when I saw trucks full of manure standing all along the line. It had been brought from London stables, and was exactly the short stuff which

the gardener likes for spreading between his rows. He obtains it at little more than the cost of carriage, but were it necessary to cart it for any distance this advantage would be lost. Clearly, therefore, it is only stating the simple fact to say that the tram line has played a most important part in developing the agricultural resources of the district. Moreover, it has been in itself remunerative, and promises to become still more so, while if there is one thing more certain than another, it is that an ordinary line through an agricultural country will not pay. It only becomes a grave for the spare capital of those who interest themselves in it. But the question may be, and has been, asked whether a light railway will do where the land is not exceptionally rich and holdings are large, and the common forms of agriculture are pursued. The answer to this will be found at no great distance. Such a line is actually worked between Three Horse Shoes, near Whittlesea and Benwick.

AN AGRICULTURAL GOODS LINE.

When you pass on from Wisbech to March and thence to Whittlesea, the character of the agriculture changes. The little fields of fruit and flowers give place to great breaks of corn and potatoes, and the fenland here is thickly dotted with homestead and cottage. Instead of gorse and broom the red poppy blooms among the crops, and the still deep dykes and meres are overgrown with duck-weed. The line does not carry any passengers, and that is a great advantage from a railway point of view. As soon as human traffic has to be dealt with the Board of Trade steps in and enforces

regulations that are no doubt necessary, but cannot be complied with save at great outlay. On this line there is not a station nor a station-master, nor even a clerk. There are no signals, and consequently no signalmen. Yet there is little danger of any accident, since never more than one engine is allowed on the line at a time, and when a guard leaves it he locks the points. The facts about this line are most curious and interesting. It has only been opened for two years, and is already profitable, thanks largely to the fact that being a goods line it cost only £3,600 a mile to construct, as compared with £5,600, or if rolling stock be included £7,300 paid per mile for the tram line at Wisbech. But, then, the land is of the ordinary agricultural kind, let in large farms and cultivated for the ordinary crops. On either side stretches the level fenland, covered when I was there with green corn and grass and roots. White roads are to be seen winding through the fields, but the "droves" or lanes that lead to the homesteads are black. In wet weather they are masses of mire, wherein cart and waggon wheels sink up to the axle. Haulage is difficult, expensive, and at times impossible. It has proved a boon indeed to bring the railway almost into the farmyard. Here the farmers work chiefly for the Metropolis. It is the population of London, not the men and women only, but the dumb millions of beasts, for which this ground is tilled. Potatoes are the great support of the cultivators, but they also send up large quantities of hay, straw, chaff, and other forage. Of pasture and cow-keeping there appears to be none, the land being all arable. There is scarcely any fruit, and the quantity of eggs and poultry produced is very trifling. But yet the farmers appear to be fairly

prosperous, as it is only natural they should. London is, as it were, brought close to them, and London has millions of mouths—of beasts as well as men—that must be fed. The soil itself is fertile, and is not overburdened in any way. Rents are perhaps fifteen per cent. less than they were in the best days, and farms are easily let. The cool low fens do particularly well in such a season as we are having, and why should any foreign country be able to thrive on the London market if the people here cannot?

EXTENSION OF LIGHT RAILWAYS.

But the practical point to consider is to what extent the system of light railways may be extended. They are not being rapidly built elsewhere, and even when Bills have been got through Parliament, it has, in some cases, been found impossible to raise the required capital. Again, a County Council is not so easily dealt with as the local bodies used to be. A majority of the members live away from any particular district, and do not know its requirements. They say, "If a company wishes to run down there let them pay for it." Whereas, those who had to be dealt with before were generally interested in the development of the neighbourhood. "Only put up a line and we will make the terms as easy as possible," was their attitude. But in considering any new scheme full local knowledge is essential. It would not be worth while to run a railway through a district that was chiefly grazing; and one may doubt if the milk trade would furnish sufficient traffic. There are, however, many market gardening localities, and many others devoted to general agriculture, that would benefit

themselves and yield a return to those who increased their facilities. Take Essex, for example. There are many portions of it—close as they lie to London—where goods have to be carted six or seven miles to a railway station, and this is sufficient to do away with the fine margin of profit. It ought, however, to encourage those who feel the need of light railways, and who have been meditating their establishment, to know the circumstances under which success has been achieved. In the case of Wisbech the market-gardening industry has been stimulated and developed by the tram line, to an extent that is most remarkable, and the Benwick farmers are already reaping a signal benefit from the goods railway. Both of these are profitable in themselves. These are facts of good omen to those preparing to embark on enterprises of a similar nature.

CHAPTER XXII.

The Farmer's Box.

THERE is at least one way in which it is indisputable that husbandmen have been earning more in late years than they ever did before. This is by sending goods direct to the consumer. It is capable of still greater increase, and hence it must be of interest to set forth some facts obtained from official sources. Frequently it has been said to me during these inquiries that it would be a great boon if other railway companies would follow the example of the Great Eastern Company. At Liverpool Street, accordingly, I asked precisely what had been done and what were the effects (1) on the farmers, and (2) on the line. The answer was most satisfactory in both respects, as will presently be seen.

THE DIRECT SUPPLY.

It was in December, 1895, that the Company began to supply boxes to convey small quantities of farm produce direct from the grower to the consumer by passenger train. They were of six different sizes, and ranged in price from three halfpence to fivepence. At the same time a cheap rate was arranged, fourpence being charged for twenty pounds weight, and a penny

extra for each additional five pounds up to sixty. Moreover, pains were taken to introduce the seller to the buyer. It has long been the custom of the Great Eastern Railway Company to issue a pamphlet containing the addresses of those in their district who are willing to let summer lodgings, and in the same way, a list was compiled of those who wished to dispose of farm produce. On the other hand, someone hit on the happy device of sending to East Anglian farmers and gardeners the addresses of all the suburban season-ticket holders. Of course, it was impossible to guarantee anything, but it may fairly be assumed that the owner of a season-ticket belongs to a respectable class, has a permanent address, and is in every way likely to furnish the kind of customer required. The success of the system is its best testimonial. In the first year 60,034 boxes were conveyed, in the second 112,098, and in the third 135,860. Suppose the average value of each to be about 4*s.*, this would represent an inflow of about £27,000 to the impoverished cultivators of East Anglia. The railway officials are delighted. They do not pretend to be philanthropists, but whatever brings money to the district has a good effect on their returns, and the traffic itself is profitable, as it works in with the rest, and is inexpensive. From other quarters one cannot easily obtain such definite information, but from Devonshire an increasing number of boxes are sent to London containing, as do those from East Anglia, poultry, butter, cheese, eggs, and other products of the farmyard. Honey, again, is very largely disposed of in this way in Kent, Sussex, and other southern counties. Surely all railway companies that are connected with agricultural districts would be well advised, as much for their

own sakes as for that of the community at large, to provide a similar service. There is no reason why they should not collect and deliver such boxes as punctually and quickly as parcels are collected and delivered by the Post Office. Their doing so would stimulate *la petite culture* throughout the kingdom.

MARKET GARDENING.

Still more instructive are the figures relating to Stratford Market. This was opened on the 1st of October, 1879, the cost, including subsequent alterations, amounting to about £40,000. I need not detail its progress. Suffice it to note the increase of traffic within the last decade. This will be seen at a glance from the following table :—

Year.	Potatoes.	Carrots.	Sundries.	Vegetables.	Fruit.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1888	16,813	1,431	4,261	4,044	544	27,093
1889	17,487	2,133	5,433	5,553	898	31,504
1890	21,096	2,297	5,245	6,692	653	35,983
1891	20,847	1,896	4,793	6,413	922	34,871
1892	24,853	2,631	4,740	5,990	524	38,738
1893	25,943	2,032	5,930	8,034	1,305	43,244
1894	26,431	2,444	6,205	9,172	1,511	45,763
1895	25,280	2,961	5,318	11,725	1,447	46,431
1896	27,973	2,823	4,599	12,490	1,817	49,702
1897	30,074	2,553	5,621	12,544	1,662	52,024
1898	27,479	2,569	7,825	13,527	1,223	52,623

It will be conceded that this is a very remarkable table, the enormous increase of vegetables and fruit showing that we go further and further afield for these articles. Not so long ago London was girdled by market gardens, from which her supplies were drawn, but the ever-extending suburbs have spread over them,

gradually enhancing the price of land till it grew too expensive for the gardener. Then Cambridge and Suffolk and Essex and Norfolk were utilised. No doubt to some extent the increase arises from the swelling proportions of London itself, but it is also certain that the consumption of fruit and vegetables per head ever tends to become greater. And again, besides the enormous population of human beings in London, we have to remember that there is also a population of dumb animals—horses, cows, and the like. In the column headed "sundries" for brevity, are included chiefly feeding stuffs for cattle—roots, hay, chaff, straw, grain, and so on. It will be noticed that the supply of these to a single market rose in ten years from 4,261 tons to 7,825. People who say there has been no revival in agriculture will do well to ponder the meaning of these figures. One who has direct means of knowing, told me not long ago that in the purely agricultural districts of East Anglia the bank balances of farmers have been steadily increasing for some years past. It sounds like heresy to say so, but even in Norfolk I am perfectly certain that a great number, probably a considerable majority, are doing well, much better at any rate than they were six years ago. More markets are needed for East London and its teeming suburbs. But these cannot be established because of certain restrictions due to the Charters granted by Charles II. and James II. conferring the right to hold a market in "Spittle Square." These restrictions enabled the owners and lessee of the Spitalfields Market to proceed successfully against the Bishopsgate depôt established some years ago, and are obstacles to the erection of markets in Walthamstow and West Ham, places greatly in need

of them. The matter is one deeply affecting the interests of agriculture, and I hope means will be found to buy up or otherwise extinguish the rights of the beneficiaries of the Charters.

THE CARRIAGE OF GRAIN.

As briefly as can be I would like to describe an experiment that interested me immensely, and conveys a most instructive lesson. The Great Eastern Railway officials found from experience that the business done in grain was purely local. Essex was confined to Essex, Suffolk to Suffolk, Norfolk to Norfolk, and so on. There was very little long-distance traffic in cereals. It was practically limited to a forty-mile radius. Indeed, the same state of things prevails in regard to manure and feeding stuffs. The county was divided into circles, each of which had its own business head. For fifteen miles round Yarmouth a Yarmouth firm reigned supreme. So it was with Ipswich, Norwich, and other towns. About 1895 the railway company determined to try a new policy. It was by no means a favourable time for it, as wheat just about touched its nadir in 1895, as will be seen from the following list of average prices per quarter. I have not put in the years, but the first is 1886 and the last 1898. In the intervening years the prices were: 31*s.* 4*d.*, 32*s.* 6*d.*, 31*s.* 3*d.*, 31*s.* 6*d.*, 30*s.* 1*d.*, 34*s.* 2*d.*, 36*s.* 8*d.*, 29*s.* 4*d.*, 26*s.*, 21*s.* 4*d.*, 25*s.*, 27*s.* 10*d.*, 35*s.* When wheat was selling at a guinea a quarter it did not appear to be a propitious moment for speculating on its increased carriage! One would have thought the farmer at that rate would have kept it at home to feed cattle and poultry. Yet in August, 1895, the rates for grain, oil

cake, and packed or artificial manure were experimentally reduced when more than five tons were sent over forty miles. If the traffic had not increased the Company stood to lose £9,000 in the long-distance trade. But once more it was proved that cheap carriage pays itself. During the first twelve months after the reduction took place the returns showed an increase of £6,000, in the second year a further increase of over £4,000, and in the third year a still further increase of over £6,000, though previous to the reduction in August, 1895, the long-distance traffic had been a stationary, if not a declining, quantity.

ADVANTAGE OF LOW RATES.

In face of facts like these it is astonishing that so many companies should follow the suicidal policy of refusing to give reasonable rates for the conveyance of agricultural produce. As has been said before, the primary aim of the Great Eastern Directors is not to revive English agriculture, but to increase their own dividends. Others might do the same by following their example. Some progress has been made, but it is still beyond question that in many districts the cultivation of land is hampered and rendered profitless by the short-sighted policy of the railway companies refusing to carry native products at reasonable rates. The effect is to leave growers at the mercy of local dealers. Each of these is a sort of autocrat in his own circle, and as long as railway rates are prohibitive, he can succeed in obtaining goods at what he chooses to pay for them. It has often happened that dealers have gone to the Company when a low rate was established, and protested that

it was ruining their business, but the answer is ready and effective: "Not at all; you cannot expect any more than other people to escape competition, and if rivals are being brought into your territory, why, the best thing you can do is to invade the hunting grounds of someone else." We have seen in a previous chapter that exactly the same state of things prevails in regard to poultry, eggs often bringing nearly twice the price in one county that they bring in another. A low, uniform charge for the carriage of farm produce is absolutely necessary to the development of agriculture. How it is to be obtained is well worth considering.

MANURE FROM TOWN.

Another thing that might be done to a far larger extent than has yet been attempted is the conveyance of manure from London to the country. Here is a curious contrast. In a Norfolk village some small people who were taking up fruit-growing complained to me that stable manure cost them six shillings a load, and could scarcely be had even at that price. Yet it is very certain that the dwarf apple and pear trees that they cultivate can never be remunerative unless richly manured. A few days before, I had been speaking to a London dairyman, who kept about a score horses for his business. He said when he started the manure from the stable was worth a trifle to him. People paid him for it. Then a time came when they would give him nothing, and now he has to pay for getting it carted away. If we consider the vast number of horses kept in London—the cab, omnibus, and tram horses, the horses kept for purposes of distribution by shops and newspapers, the

carriage horses, the dray horses, and all the rest—it will be apparent what vast quantities of manure must be produced, and yet how many thousands of acres are half starved. Here, too, the Great Eastern Company found it to their advantage to step in with aid. In January, 1895, reduced rates were put into operation from London to most of the Great Eastern Station districts between sixty and seventy miles distant for the conveyance of stable manure, vestry refuse, gas lime, and similar things, and in March, 1898, these rates were still further reduced. At the present moment from 5,000 to 6,000 tons a week are being carried out of London by this Company. It would certainly be a great point gained if other companies would do the same thing. For it has to be borne in mind that on the farm itself, now that so much land is laid down in grass, much less manure is produced than formerly, and it is needed as much as ever. It has often occurred to me that the coal waggons that come from the north might be utilised for this purpose in regions beyond the range of the Great Eastern Railway. They are sent back empty. Would it not pay the Companies as much as it would suit the farmer and the London stableman to load them with manure, which could then be carried at a low rate to districts where it would command a price? It seems like a waste of energy to send the trucks back empty.

THE MORAL.

It is by making public such facts as those given above that we may hope to secure the desired reduction of railway charges. Needless to say, the various companies are inspired with a very keen anxiety to advance their own interests. They are not to be blamed for that, and

it is perfectly useless to appeal to them on any plea for sympathy. The answer comes that they were not called into existence to nurse agriculture or benefit struggling farmers, but to conduct profitably a huge carrying business. If, however, it can be demonstrated to their satisfaction that low rates mean increased revenue for them, to refuse a change would be suicidal. At the same time certain conditions have to be observed if low rates are to pay. First and foremost, the carriers must be assured of a good truck load. A truck in itself weighs from four and a half to as much as thirteen tons, and to pull it about with a light load lying at the bottom of it is not by any means a remunerative undertaking. Wherever goods have to be transported in large bulk it will be found that reasonable terms are obtainable. In classes of business wherein this is not possible regularity counts for a good deal. If every day, or on certain days, a fixed traffic can be guaranteed, it is obvious that it can be done cheaper than if it comes at irregular intervals, necessitating the keeping up of a rolling stock that is for a great portion of the time out of employment. This, again, does not apply to parcels and boxes, which can be easily worked in with the ordinary traffic. It must be "of the very essence of the contract" that this business is done with precision, punctuality, and dispatch. The Parcels Post has educated people up to a very high standard in this respect. Here is a service in which the utmost reliance can be placed. It involves a minimum of trouble to the sender and of delay to the receiver. A package may be handed in to the Post Office with the certainty that it will be delivered in most cases within the twenty-four hours, be the distance great or small. Before it was established railway

companies were great sinners in this respect, and seemed to think that a few days or a week made no difference in the delivery of a small package. Those times are past and done with. There is no reason why a railway should not convey and deliver as quickly and promptly as the Post Office. If the cultivators of land meet their requirements it is their part to fulfil this demand. A great deal can be accomplished by the people in a district working together. It is best for the market, as well as the railway companies, that supplies should not go spasmodically but in a regular stream, so as neither to over-press the carriers nor to glut the market. Organization is the key-word of the riddle.

BELGIAN RATES.

The following interesting note on Belgian Rates was sent by the Brussels correspondent of the *Morning Post*:—

In Belgium agricultural and dairy products have the benefit of special rates on all the railways. These special rates also apply to margarine, honey, oil cake, bacon, dead rabbits, and fruit. The tariff generally is 10fr. 60c. per 1,000 kilos (about 2,400 lbs.) for a distance of 100 kilomètres (about sixty-two miles), 25·2fr. being equal to one pound sterling. The rates, however, are still more favourable when the distances are increased. In the case, for instance, of a journey of 200 kilomètres the charge per 1,000 kilos is 17fr. 60c., while for 300 kilomètres it is only 21fr. 60c. In order to secure the advantage of these charges the minimum dispatch must weigh 200 kilos. All products in the nature of feeding stuffs are likewise forwarded on the terms named. Oats, grain, maize, and other cereals pay 6fr. 25c. per 1,000

kilos for a distance of 100 kilomètres, 7fr. 50c. for 200 kilomètres, and 8fr. 50c. for 300 kilomètres.

Horses, asses, mules, ponies, colts, and foals are sent by express trains at the rate of 63fr. per 100 kilomètres, 105fr. 60c. for 200 kilomètres, 129fr. for 300 kilomètres, and 153fr. for 400 kilomètres. These charges are applicable to consignments of three head and upwards. Cattle can only be dispatched by slow trains and at the following rates:—For 100 kilomètres: Service A, 14fr. 25c.; Service B, 21fr. 40c.; Service C, 28fr. 50c. per waggon, which the trader can load to any extent he pleases at his own risk.

Early fruits, vegetables, and flowers may be sent on by an accelerated service, the rates for which are:—For 100 kilomètres, 2fr. 70c. per 100 kilos; 200 kilomètres, 4fr. 10c.; and 300 kilomètres, 4fr. 90c. By the express service the tariffs are for the same weights and the same distances: 6fr. 80c., 8fr. 60c., and 9fr. 80c. respectively.

The exports to England of Belgian agricultural and dairy products are very considerable. The official statistics for the first three months of the year 1899 are as follows:—

	Kilos.	Francs.
Butter and Margarine	43,201	93,000
Vegetables	5,000,109	387,000
Feeding Stuffs	436,552	65,000
Fruits	743,194	289,000
Grain (various)	6,507	1,000
Flour	1,017,107	254,000
Fodder	1,438,095	81,000
Tobacco	8,689	104,000
Meat	2,098,036	2,541,000

The eggs exported to England during January, February, and March numbered 8,295,470, and were valued at 581,000fr.

CHAPTER XXIII.

Farming in Germany.

In order to ascertain how our methods of agriculture compare with those of countries that appear to be more successful, the editor of the *Morning Post* asked several of his foreign correspondents to make inquiries on the spot. From the interesting replies given I select the following as bearing very decidedly on some aspects of our own policy :—

Agricultural Germany may be divided roughly into two parts. To the west of the Elbe are situated the smaller and medium-sized farms of the peasantry; to the east of it lie the large landed estates of the Prussian and Mecklenburg nobility. The south-western and north-eastern extremes of the Empire furnish in this respect a remarkable contrast. In Wurtemburg, Baden, Hesse, Alsace, and Lorraine, one is confronted almost exclusively by "dwarf" possessions of less than five acres in extent. In the eastern provinces of Prussia, on the contrary, "giant" estates, with an average of more than 250 acres, occupy 75 per cent. of the land under cultivation. Of these 5,320 exceed 2,500 acres each, and in isolated instances the size of the estates extends to 150,000 acres. The superior class of peasant proprietors, with possessions varying from 50 to 250 acres, is settled chiefly in Oldenburg, Brunswick, as

well as in the Prussian provinces of Schleswig-Holstein, Hanover, and Brunswick, and in parts of Eastern and Western Prussia. The main seat of the smaller and medium peasant holdings is to be found in Bavaria and Saxony. The following figures show the relative proportions occupied in Germany by the various classes of agricultural holdings :—

	Percentage of Total Holdings.		Percentage of Cultivated Land.		Percentage of Total Land.	
	1895	1882	1895	1882	1895	1882
Under 5 acres ..	58·22	58·03	5·56	5·73	5·59	5·37
5 to 12½ acres ..	18·29	18·60	10·11	10·01	9·57	9·54
12½ to 50 acres ..	17·97	17·56	29·90	28·74	28·96	28·60
50 to 250 acres ..	5·07	5·34	30·35	31·09	30·39	30·90
250 acres and over	0·45	0·47	24·08	24·43	25·49	25·59

ECONOMIC IDEAL.

Viewed in this broad statistical light, the partition of the land in Germany approximates very closely to the economic ideal. The main portion of the land is tilled by peasant owners with the aid of their families and hired workmen. Farming on rented land occupies a comparatively unimportant position in the economy of agricultural Germany. The situation in this respect is illustrated by the following figures :—

Extent of Properties.	No. of Properties.	Properties entirely leased.	Properties Farmed by Owners.	Properties partially leased.	Area leased.
		Per cent.	Per cent.	Per cent.	Per cent.
Under 5 acres ..	3,061,831	24·9	50·2	24·9	29·7
From 2 to 50 acres ..	1,908,012	2·7	61·7	35·6	10·2
From 50 to 500 acres ..	292,543	3·8	80·3	15·9	10·3
Over 500 acres ..	13,958	22·8	61·1	14·1	27·2
Total	5,276,344				
Percentage ..		15·7	63·6	20·7	14·68

Tenant farming it will thus be seen is practically restricted to the smallest and largest categories: (1) To allotment holders who are mainly dependent for their living on other occupations than agriculture; and (2) to those agriculturists on a large scale who lease big estates from the State, the Church, the Universities, and other communities.

AGRICULTURAL LABOURERS.

The agricultural labourers consist for the purposes of definition of two classes—those who are bound by contract (generally for a long period) and those who are free. The first category embraces the so-called Hof or Gutstagelöhner, the Instleute, Gärtner, Dreschgärtner, and, in Westphalia, the so-called Heuerleute. They dwell on the estate of their master, from whom they receive, in addition to a small monetary payment, a house, corn, firing, and the use of a strip of land. The Gutstagelöhner are obliged to employ an assistant, generally their grown-up sons, and their wives must be prepared in the summer to work in the fields for a set wage. They exist for the most part in the North and Eastern Provinces of Prussia, where, owing to the absence of a small peasant proprietary, their services are indispensable. Their rapid migration to the towns constitutes one of the most serious agricultural problems of the Empire. The free labourers are paid on a somewhat better scale than those who are engaged by contract. But their existence is of a precarious character. Only in the neighbourhood of towns, where they have the opportunity of securing employment in the winter months, is it in any sense

tolerable. A class of labourer closely approximating to that just described is the Sachsengänger, or Wanderers. Organized in bands of from fifty to a hundred, they emigrate each spring from their homes in Russia, Poland, and Galicia, and during the summer work in their hundreds of thousands on the farming estates of North-Eastern, Central, and Western Germany. The majority of them are women. Their presence is attended by many evils. It renders the position of the German labourer to some extent superfluous, and increases his desire to seek better fortunes in the large centres of population. The Prussian Government has recognised the danger of this state of things, but as yet the funds it has devoted to the purchase of "giant" estates in Eastern Prussia for the purpose of converting them into small peasant holdings, and thus creating a healthier division of the soil, have not had the effect of stemming the tide of the rural labouring population to the towns. I shall return to the subject in a subsequent letter.

A significant statistical table was laid before the annual meeting a few months since of the official Landes-Oekonomie Kollegium. It had been prepared by the Prussian Minister of Agriculture with the object of furnishing financial testimony to the increased measure of attention paid by the Government in recent years to the interests of agriculture. It showed that the estimates under the head of Agricultural Administration have grown from £560,712 in 1890 to £1,017,952 in 1899. The figures apply to Prussia alone, but it is safe to say that an examination of the Budgets of most of the other Federal States will yield similar results. German State activity in the Departments of Agriculture has, in fact,

been developed in the same spirit of thoroughness that has characterized it in relation to industry and commerce. Its aim has been to foster self-help. Much still remains to be accomplished; but what has already been done inspires the hope that for Germany the agricultural crisis will prove to have been a blessing in disguise, and that the business will emerge from its tribulations with an appreciable access of strength.

AGRICULTURAL PRODUCTION.

During the fifteen years which followed 1882 the rural population of Germany declined to the extent of 724,148. In 1895 it numbered 18,501,307. The decrease is accentuated if regarded relatively instead of absolutely. During the same period the inability of German agriculturists to supply the needs of the whole population has become increasingly apparent. Up to 1870 the corn produced in Germany was sufficient for the home demand. Since then the imports of agricultural produce and cattle have extended with annually increasing rapidity. In 1889 they amounted to 4,296,953 tons, in 1897 to 7,524,297 tons, and in 1898 to 8,590,818 tons. It must not, however, be supposed from these figures that German agriculture has in any sense of the term exhibited an absolute decline. Since the early years of the century, indeed, the area of land under cultivation has been constantly augmented. Since 1878 it has grown from 32,752,234 to 33,040,268 hectares, from 60·65 to 61·13 per cent., that is to say, of the total area. Approximately half of it is devoted to grain and garden land and a quarter to forestry. The division of the grain and garden category is as follows:—

	1878. Per cent.	1883. Per cent.	1893. Per cent.
Corn	52·59	53·46	54·37
Husk fruits	6·06	5·54	5·64
Other grained fruits	1·14	1·06	0·93
Roots and vegetables	13·64	15·07	16·15
Plants for industrial purposes	1·60	1·35	0·99
Fodder	9·39	9·19	9·60
Pasturage	5·80	5·69	4·61
Fallow land	8·89	7·05	5·91
House and fruit gardens	0·89	1·59	1·80

The rearing of cattle has also steadily progressed. There were in the German Empire on—

	Horses.	Oxen.	Sheep.	Swine.	Goats.
Jan. 10th, 1873 ..	3,352,231	15,776,702	24,999,406	7,124,088	2,320,002
Jan. 10th, 1883 ..	3,522,316	15,785,322	19,185,362	9,205,791	2,639,994
Dec. 1st, 1892 ..	3,836,256	17,555,694	13,589,612	12,174,288	3,091,287
Dec. 1st, 1897 ..	4,038,485	18,490,772	10,866,772	14,274,557	—

GERMANY'S MOST PROSPEROUS PERIOD.

The prosperity of German agriculture was at its height during the twenty years preceding 1870. But the continued rise in the price of corn, the innumerable improvements introduced in those years in the shape of machinery, manures, and fodder, had one grave consequence. They induced an exaggerated feeling of confidence in the continuity of an almost abnormal state of prosperity. Prices were paid for farming land far in excess of its actual worth, notwithstanding the fact that the expenses of production were steadily rising. When the reaction came and Europe was flooded with cheap corn from the New World, the distress of the agriculturists was rendered still more

painful by contrast with the flourishing state of German industry. The crisis was to some extent ameliorated by the conversion of Bismarck to a mild form of Protection. The price of cereals has in consequence of this been uniformly higher in Germany than in Great Britain. But the main efforts of the Government have been directed to improving the education and organization of the agriculturists themselves. Legislation has aided the formation of Agricultural Banks, and rendered it possible for farmers to borrow the capital of which they stand in need on the most moderate conditions. The evils of usury, which oppressed German agriculture as with a terrible weight, have been largely extinguished. Above all things, the Co-operative movement, which as regards agriculture may be said to have been cradled in Germany, has been fostered and assisted by the State legislation.

CO-OPERATION.

Since 1890 the number of Agricultural Co-operative Associations has been tripled. These Associations may be divided into five classes: (1) Kreditgenossenschaften or Loan Associations; (2) Associations for the purchase of fodder, manures, seeds, instruments, breeding cattle, &c., the so-called Konsumgenossenschaften; (3) Associations for the common use, especially of machinery and breeding cattle; (4) Associations for the sale of products, the so-called Productionsgenossenschaften; (5) Associations for the execution and maintenance of works of amelioration. The Konsumgenossenschaften buy their goods from wholesale dealers, and have their quality tested at one of the many experimental

stations or chemical laboratories erected in the interests of agriculture. The most frequent of the Verkaufsgenossenschaften are the Mölkereigenossenschaften, which undertake not only the co-operative sale of milk but also the co-operative manufacture and sale of butter and cheese. Their action has largely assisted the transition of many landed proprietors from the practice of sheep rearing—as exhibited in the statistical figures given above—to that of cow-farming. Another class of Verkaufsgenossenschaften is formed by the so-called Kornhaus or Getreidegenossenschaften, which undertake the cleansing, mixing, and storage of the corn sent in by their members. These Associations require a considerable working capital, but, on the other hand, they can afford, as the isolated farmer very frequently cannot, to wait for a favourable market before selling. The majority of the Genossenschaften in the various districts of the Empire have allied themselves for the purposes of improved organization with Central Co-operative Associations. Of these the largest are the Allgemeine Verband der landwirtschaftlichen Genossenschaften in Deutschland (founded in 1884), with its headquarters at Offenbach, and the Verband ländlicher Genossenschaften in Neuwied. Apart from their practical utility, the various Co-operative Associations have been found to exercise an educating influence on the smaller peasants. Their distribution on July 1st, 1896, was as follows:—

Kreditgenossenschaften	6,391
Konsumvereine	935
Molkereigenossenschaften	1,397
Other Genossenschaften	273
	8,986

AGRICULTURAL ASSOCIATIONS.

Agricultural Associations, constituted very much in the same fashion as the English Chambers of Agriculture, have increased rapidly of recent years. In 1881 they numbered 1,322, and in 1896 2,761, with a total membership of 133,911. These organizations have also been gradually centralized, and in their centralized form they have received a semi-official character. The Landesökonomie-kollegeum in Prussia, for instance, is composed partially of delegates from the provincial Associations, and partially of representatives of the Government. Soon after the foundation of the Empire the German Agricultural Council (Deutsche Landwirtschaftsrat) was called into existence. It consists of seventy-five Deputies from the various Central Associations throughout the Empire, and its advice is invariably solicited before new measures dealing with agriculture are submitted to the Reichstag. The Central Associations in each Province, it should be added, are in receipt of Government funds for the institution and maintenance of Agricultural Schools, Experimental Laboratories, Exhibitions, &c. It is one of their functions to report periodically to the Government on the condition of agriculture in their respective districts. They have, however, been largely superseded in Prussia since 1894 in consequence of the action of the law providing for the establishment of Chambers of Agriculture. This law was prompted by the necessity of raising small local taxes to defray the expenses of agricultural administration. The Central Associations rested on a voluntary basis, and, moreover, only represented 140,000 out of a total of 3,000,000 independent

farmers in Prussia. The Chambers of Agriculture, on the contrary, are elected on a liberal system of "agricultural suffrage." The decision as to the desirability of their formation in any Province was left with the Provincial Diets. These have all decided to benefit by the utility of the new law.

AGRICULTURAL EDUCATION.

There are three groups of agricultural educational establishments in Germany—High, Middle, and Lower Schools. The first category extend back as far as 1806. They have been largely developed in recent years. Many of them are attached to Universities, as at Halle, Leipzig, Giessen, Königsberg, Kiel, and Breslau, and they are all of them entirely dependent on State support. They are entrusted with the double task of fostering scientific investigation and instructing their scholars in the scientific principles of agriculture. The Middle Agricultural Schools are about thirty years old, and are intended for the sons of fairly well-to-do peasants. A general education is accorded at them, but special attention is devoted to natural science and agricultural subjects. There are also a large number of Agricultural Winter Schools situated for the most part in small towns. The scholars are the sons of peasants, who in the summer work on the parental farm. The teachers during the period of their scholastic inactivity wander about from farm to farm studying the latest improvements in the district, and distributing on solicitation scientific advice to the farmers. The number of these Winter Schools amounted at the end of 1898 to 168. The continuation school system applied

to the purposes of agriculture has been largely adopted in Southern and Western Germany, and to a less extent in Eastern Prussia.

RAILWAY RATES.

It remains to add a word on the subject of railway transport. The fact that the vast majority of railways in Germany are State-owned has enabled the Governments to frame the tariffs in the interests of the national industries. For a number of years the tariffs for goods traffic have been uniform throughout Prussia. In their arrangement the Railway Ministry is assisted by the Landes-Eisenbahnrat, or Committee of Railway Communication, consisting of thirteen members selected in equal proportions from the representative Corporations of Commerce, Industry, and Agriculture, with one Bavarian member. There are also, in addition to this Central Committee, nine similarly composed District Railway Committees in Prussia, as well as Committees in Mecklenberg, Saxony, Wurtemberg, Alsace, and Lorraine. The special tariff for raw products of low value amounts to 8 pf. the ton up to 10 kilomètres, and to 9 pf. between 10 and 100 kilomètres. For turf, manures, and potatoes a still lower tariff has been introduced in the shape of the so-called Staffeltarife, the principle of which has since 1895 been applied to the transport of cattle. For the three years preceding 1894 the Staffeltarife were extended to the carriage of corn, but during the debates on the Russo-German Commercial Treaty this arrangement was abandoned owing to the protests of the agriculturists from Central and Western Germany. The Staffeltarife are framed

to accord with the relatively reduced cost of transporting goods over long distances. A reduction of one-eighth is made after the first 100 miles, and of two-eighths after 200 miles have been traversed. This progressive reduction continues until the charge amounts to one-half of the initial rate per mile.

CHAPTER XXIV.

Farming in France.

It will be seen that the first of these letters from the Paris correspondent of the *Morning Post* deals with the statistics and general conditions of French agriculture, while the second offers some explanation of its success as compared with farming in this country.

Climatic conditions and the nature of the soil have led economists to divide France into five agricultural zones, of which the orange, olive, mulberry, and vine districts are of little interest for purposes of comparison with British agriculture. The remaining district consists of thirteen regions, more or less arbitrarily fixed.

AGRICULTURAL REGIONS.

These districts are as follows :—

(1) North : Eight Departments, distinguished by wheat, meslin, hemp, oats, vegetables, beetroot, and artificial meadows. This is the richest region.

(2) North-west : Seven Departments—Wheat, oats, barley, vegetables, natural meadows, cider apples, and cattle breeding.

(3) North-east : Four Departments—Oats, potatoes, hops, and artificial meadows.

(4) North centre: Seven Departments—Meslin, oats, barley, natural meadows, and vines.

(5) Centre: Nine Departments—Meslin, rye, wheat, oats, barley, vine, and natural and artificial meadows.

(6) South centre: Five Departments—Rye, buckwheat, and natural meadows.

(7) East: Seven Departments—Wheat, maize, buckwheat, hemp, natural meadows, and vines.

(8) South-east: Seven Departments—Potatoes and vines.

(9) South: Eight Departments—Vines and mulberries.

(10) South-west: Eight Departments—Wheat, maize, and pasture.

(11) West centre: Eight Departments—Wheat, meslin, barley, maize, natural meadows, and vines.

(12) West: Seven Departments, growing wheat, barley, and buckwheat.

Corsica, which produces no wheat, is the thirteenth region.

It is thus seen that cereals are grown nearly all over France. The districts enjoying the highest reputation are, however, Flanders, Artois, Soissonais, Beauce, Brie, Véxin, and some other smaller localities.

DEVELOPMENT OF INTEREST IN AGRICULTURE.

For a long time the duty of fostering the agricultural interests of France was entrusted in turn to the Government Departments of Commerce, the Interior, and Public Works. But in 1881 a special Ministry of Agriculture was created. It includes a Board of Direction of Agriculture, a Board of Forests, a Board of Agricultural Hydraulics, a Stud Board, and numerous advisory

Committees and Commissions. In 1885 the Budget of Agriculture amounted to 39,000,000fr., and in 1893 to 46,000,000fr. More and more attention is being given to the protection of the industry. Chairs of Agriculture are being established everywhere. Agriculturists are encouraged by being awarded decorations of merit, and exhibitions are organized all over the country. Since 1892 the Protectionist *régime*, in favour of which a very strong feeling then existed, replaced the Free Trade system established by the Second Empire. M. Méline was, and is still, the corner-stone of the new *régime* of France. Protection is especially intended to benefit agriculture, on which depend some 20,000,000 of the inhabitants of the country.

INTRODUCTION OF PROTECTION.

The competition of new countries, which inundated the European markets with their cereals, caused an intense crisis as long ago as in 1880, the event being the consequence of a natural economic law. In Canada and Australia land costs a nominal price, there were few taxes to pay, and for a long time to come fertilisers will be unnecessary. These three conditions were so exactly the antithesis of what existed in Europe that a fall in price of four or five francs occurred, and made it impossible for the French producer to compete with any hopes of success. Hence the Protectionist *régime*. The French farmer now finds his corn costs him from seventeen to eighteen francs the hectolitre, and therefore he must sell at from twenty to twenty-one francs. The present protective duties have certainly improved the situation; but, nevertheless, the struggle is still very

keen. Many measures have been taken in the past twenty years by the Ministers of Agriculture to assist the farmer. Reductions in transport rates were inaugurated in 1893 for food stuffs and for cattle, and a system of postal packages, weighing ten kilogrammes, was established. During the year of drought (1893) the Customs Duties were suspended; but, on the other hand, in 1895 a Bill was passed called the "Padlock Law," rendering new duties proposed by the Government applicable immediately, and thus preventing the importation of vast quantities of merchandise before the projected Bill passed. If the Bill is thrown out the duties collected are refunded. I do not refer to the tariffs of penetration, which constitute a question apart. It is plain, moreover, that there can be no absolute *régime* in a country partly industrial and partly agricultural. The inhabitants of the rural districts are Protectionists, while the industrial centres, such as Lyons and Marseilles, are in favour of Free Trade. The ideal result would be to conciliate all these interests, and it is not easily reached.

EXCHANGES WITH GREAT BRITAIN.

As regards exchanges with Great Britain it is somewhat difficult to furnish precise information. Property in France, where there are very few large landed proprietors, is much more sub-divided than in England. Of the 600,000 landowners in France only 217 possess holdings of over 500 hectares (a hectare is about two and a half acres); 28,000 own from 100 to 500 hectares, 56,000 from fifty to 100 hectares, and the holdings of the remainder are lower than fifty hectares. The value of the landed interests is estimated at eighty milliards, and

that of the plant, implements, &c., at eight milliards and a half. The wages paid annually to agricultural labourers amount to four milliards. Coming to the question as to whether there exists special tariffs favouring exports to England, it must be said that there is no general principle regulating the matter. To thrash out the question the only course open is to study the tariff lists, which are so voluminous that a wheelbarrow would be necessary to transport them. Some advantages are accorded wines. The other agricultural products benefit by various methods of grouping in the first place, and also by conditions effecting rapidity of transport. The conditions are fixed by the Railway Companies, and their aim is naturally to make such arrangements as most favour their traffic. It may be stated in a general way that it is often to the advantage of the producer to export his produce.

EXPORTS FROM NORMANDY AND BRITTANY.

Normandy sends much butter, eggs, and poultry to England, but it must be pointed out that in many districts this export trade is worked with English capital and by English companies, who send buyers round to purchase the produce on the spot, and to arrange for its transport in bulk. The same system is pursued in connection with the potatoes exported to England from Brittany. Large quantities of onions, too, are exported to England from Brittany, especially from the district round Roscoff. The way in which this trade is carried on is curious. The peasants band together and form veritable Trusts. Among themselves they choose a "master," who directs the operations.

These associations are set on foot without any aid from a notary or lawyer, and it is an unheard-of thing for one of the contracting parties to violate his engagements. Each of the members of the Trust goes to a different town in England, lives there for six months, and disposes of his onions. Other districts of France export wheat and cattle to England, but more commonly poultry, eggs, cheese, and butter. I make no reference to wines or sugar. It would be easy to go into greater detail, but I shall confine myself to these general observations.

SOURCES OF BENEFIT.

To sum up, the prices of agricultural produce, which had fallen away in France, have been sent up and kept up by protective duties. A notable impulse, too, has been given to agriculture by various measures, such as the extension of the Parcels Post, which has facilitated direct sales, the institution of agricultural shows and Government and local awards, the repression of fraud, the law on the agricultural syndicates and on warrants, and the reduction of transport rates by less rapid delivery. As to the produce exported to Great Britain, it benefits by a system of grouping that reduces tariffs, by the tariffs of penetration, by the rapidity of transport —there are special tariffs for express trains—and by the desire of the Railway Companies to develop their goods traffic and by private initiative acting apart from official intervention.

CHAPTER XXV.

Why Farming Pays in France.

In my previous letter on agriculture in France, I dealt with the situation from a general point of view. On the present occasion I have inquired more specifically into certain questions lending themselves to comparison with similar problems in Great Britain. I had hoped to derive my information directly from M. Méline, the former Premier, who is known in France as "The father of agriculture," but the latest Parliamentary incidents, his speech at the Hotel Continental, and an urgent call into the country, prevented him from granting me the promised interview. In expressing his regret, however, M. Méline mentioned M. Henri Sagnier, Director of the *Journal de l'Agriculture*, as an undisputed authority on agricultural questions. To him, therefore, I turned, and have to acknowledge a most courteous reception.

M. SAGNIER'S VIEWS.

M. Sagnier's reply to my inquiry as to what measures could be taken to obviate the lack of agricultural labourers was a decided one. "It is absolutely impossible," he said, "to take any efficacious measures to that end or else it would be necessary to imitate

Russia and to forbid peasants from quitting their villages under penalty of fines. The question touches the general social problem. Clearly rustics cannot be prevented from going to towns and working in factories. That is a question of individual initiative. At the same time it is the cause of so much agricultural machinery having been bought in France within the past few years. Individual action and initiative must find the remedy, must discover the means of keeping the rural labourers in the country, and even of attracting labour from the cities.

"But there is also an important social point to be considered. Unfortunately, it is true that the Democratic principle of organized assistance for the needy either does not exist at all or hardly exists in the country. In the cities, owing to the Mutual Aid Societies, hospital institutions, homes for the aged, &c., the old workman manages somehow, with difficulty no doubt, but still he manages—to find some corner where he may finish his days in peace. Very little has been done in this direction in the agricultural districts, and the old peasant is always confronted by the fear of some day lacking his daily bread. That is certainly one of the hundred causes of the exodus from the rural districts. It is impossible for the State to interfere with individual liberty, to compel, for instance, the soldier who has just finished his Military service to return to his village after having tasted city life. Individual initiative, personal effort, and organization of mutual and other aid in the country are the only remedies against lack of agricultural labour."

UNION IS STRENGTH.

"Are not combination and centralization the chief causes of the success of agriculture in France?" was my next inquiry.

"There is no centralization properly so-called in France was the answer. Nor is there any great enterprises of combined cultivation. But during the last ten years agricultural syndicates have been formed everywhere. They enable agriculturists to purchase fertilisers and machinery on easy terms, and by supplying really excellent articles have done and do a great deal of good. Thus, since 1881, the use of fertilisers has increased tenfold in France. The combinations that exist are combinations due to private initiative. It is natural that they should have borne fruit on the principle that union is strength. Other happy influences are the system of agricultural credits, and the law as to warehoused goods. In short, the success of French agriculture is due to private initiative and effort apart from any official action. There are in France several hundred agricultural Syndicates besides the powerful Société des Agriculteurs de France, of which the Marquis de Vogué is President."

THE LABOURER AND HIS HIRE.

"What wages," I inquired, "may be considered fair for men, women, and children in the various branches of agriculture?"

"That, too," replied M. Sagnier, "is a very elastic question, and one to which the reply would vary with the climates, the branch of agriculture, and the period

of the year. There are men who, in the harvest time, are paid as much as five and six francs a day. In the South, during the vintage, the vintagers receive 5fr. or 5½fr. Women are paid at the same rate. But these wages are, of course, transitory. It is extremely difficult to fix absolute averages. The cost of living in a certain region may cause the rate of wages paid there, though lower in figure than that paid in another region, to be really more advantageous to the labourer. Statistics have been drawn up as regards agricultural domestics, and the following is a list:—Labourers and carters (men), receive salaries averaging for the whole of France 360fr. a year; men servants receive 304fr.; children 151 fr.; and women servants 202fr. But these figures have only the value of averages extracted from statistics. To them, of course, must be added the fact that the farm servants are boarded and lodged—in short, they receive the necessaries of life. They are, however, domestics. The journeyman or workman receives better wages, but these vary with the districts, the seasons, and the demand. They are very changeable. Woodcutters sometimes earn nine francs a day."

INTEREST ON CAPITAL.

Coming next to the question of what return is considered reasonable on capital invested in the different industries of the soil, M. Sagnier said:—"There are two returns to be considered—the interest on the capital invested in the land, and the return for the work, &c., of the farmer. Revenue from land does not vary just now lower than 2½ per cent. or higher than 3 per cent. But the value of land experienced a great decrease, though

it is now rising again. At the worst of the famous crisis land that had previously changed hands at 10,000fr. was sold at 1,000fr. the hectare (two and a half acres). The value of such ground now is more reasonable, and would be from 6,000fr. to 8,000fr. As to the farmer's return for his labour, working capital, plant, and so on, an interest of 5 to 6 per cent. is equitable, and French farmers are satisfied with that after they have covered their cost of living, the education of their children, &c. Vines bring in a better return, however, reaching even to 8 and 9 per cent. But in this connection it must be said that on the value of the man depends the value of the thing. It is all a question of cleverness, intelligence, and work. There are in the wine district of Béziers vineyards producing from ninety to one hundred hectolitres (one hectolitre equals twenty-two gallons) of wine per hectare (two and a half acres), while others only give forty to fifty hectolitres. In agriculture, as in everything else, intelligence results in profit."

THE INFLUENCE OF EDUCATION.

"Higher education," said M. Sagnier, "has had practically no influence on the rural exodus. Our country population consists of the *petit bourgeois*, the agricultural *bourgeois*, and the peasants. Higher education appeals to a select class, the rich proprietor. But what has had a regrettable and evil effect is primary education. You quite understand," added M. Sagnier, "that I speak of the excess—of the abuses. The inspectors and teachers, in order to obtain credit, and to be much thought of, have pushed many pupils into working for certificates of study, have created little

prodigies, half savants, who think themselves called to higher destinies, and turn away in contempt from work in the fields. The malady is, moreover, spreading throughout all classes of society. Higher education has only affected the sons of Government officials, or of *bourgeois*, who have suffered a little from the exaggerations committed in the name of education."

THE SECRET OF SUCCESS.

"Have the French habits of frugality and economy influenced the agricultural situation, and if so, in what way?" was the next question.

"French agriculture only survived the intense crisis through which it passed owing to these habits," said M. Sagnier. "Without these traditions of economy, without what is called the 'woollen stocking' in which the French peasant keeps his savings, he would have thrown all to the winds as was done in England. His savings were badly reduced, but now they are beginning to grow again. But once again it is merely owing to the French habits of economy that the crisis was weathered. It did more harm in England than in France. Thus, in England, the old farmers are disappearing, and there is one hard fact to be considered. England to-day produces 25 per cent. less cereals than she did a quarter of a century ago. The situation in England and in France permit the comparison of two economic policies. England passed through the same phases as France, the same crisis caused by American and Australian competition. She preferred to sacrifice agriculture to industry by declining to protect the former. She did nothing, and the result is patent. In

France the farmers protested. They insisted on living, and the new economic system has proved favourable to them."

EMPLOYMENT OF CHILDREN.

I will conclude this letter by a few words concerning the employment of children in agricultural pursuits in France. French law compels children to remain at school till the age of thirteen, when they may be apprenticed, or may work in the fields. In practice the law is not always strictly carried out. There are many places where children even five or six years old are useful in watching flocks. The winter may be hard, and the school far from the farm. The authorities close their eyes during the winter. Generally speaking, after his first Communion, that is to say, between eleven and twelve years of age, the peasant child ceases to attend school. But even before that period he is of use in the manifold labours of the farm when not at his classes.

CHAPTER XXVI.

Farming in Italy.

In political circles great attention is being paid to the condition of agriculture in Italy, and some alarm is expressed at the decrease in the production of corn, wine, hay, oranges, lemons, and other agricultural produce within the last twenty or thirty years. It is argued that, while Italy has spent nearly £12,000,000 for Erythrea within the past ten years, only £4,500,000 has been expended on the much more important object of agriculture. "Let us colonise Italy" is the demand, and this, it must be said, is a most wise and desirable cry. The late Minister of Agriculture, Signor Fortis, prepared a well-studied scheme of home colonisation, which, but for the fall of the Government, would have been submitted to Parliament in the summer of 1899. His successor, Signor Salandra, who is a man of energy and experience, ought to see that the benefits of Signor Fortis' labour are not lost.

A WISE LANDLORD.

The following account of what has been done by Signor de Leo, the owner of a latifondo, or huge estate, in Calabria, is instructive. As he was convinced that

absenteeism was the cause of most of the misery and poverty prevailing on the large domains of Sicily and Calabria, he began by constructing, under his personal supervision, a village in the centre of his property. He built many houses for his peasants, erected a church, a fountain, a mill, stables, and manure yards. Instead of treating the peasants as day labourers, to be paid with the inferior products of the soil, he introduced the Tuscan system of mezzadria, under which, half the products go to the landlord and half to the cultivator. The land given to each peasant is sufficient to provide work for himself, his wife, and children, and whenever extra help is needed Signor de Leo encourages the family groups to help each other rather than to bring in day labourers from outside. With the most diligent peasants he adopted the system of guaranteeing them the possession of their land for twenty-nine years, and giving them a right to more than one half of the products on condition that they should bring uncultivated areas into cultivation. Thus an important agricultural enterprise and a flourishing village have grown up in a place which a few years ago was practically a desert. If other Sicilians and Calabrian landlords would follow Signor de Leo's example, the difficult question of the huge estates would be reduced to much simpler terms.

SYSTEMS OF LAND TENURE.

The efforts made by the *Morning Post* to impress on the public the importance of agriculture to the prosperity of England are strangely familiar to Italians. Ever since the close of the struggle for unity the need for helping agriculturists in Italy has been continually

brought before the Italian Parliament and people. But for various reasons, some of which do not exist in England, progress is slow. In Italy land is principally held in three ways. First, there is the huge estate, or latifondo, as it exists chiefly in Sicily and the southern provinces. On that type of holding peasants work principally as agricultural labourers, just as in England, having no personal interest in the land, being merely the hired servants of the landlord or of his tenant. In the second place there is the system of mezzadria, which prevails to a great extent in Tuscany, Umbria, Emilia, and some other provinces. On that principle the soil is owned by a landlord, who divides it among peasant cultivators, making a contract with each that in return for the use of the land he shall receive a portion, generally half (mezzo), of the produce. The third method has reference to small proprietors, who own, and, with the help of their wives and children, cultivate their possessions. This system is identical with the *petites cultures* common in France. Besides these three leading principles of operation there exists in Lombardy and some of the adjoining provinces, a system by which the owner of a large estate has a number of peasant families living in hovels on his domains, whose services he rewards by sharing the secondary products with them, keeping the corn and all the prime produce to himself.

RAILWAY RATES, ETC.

At present no preferential rate exists for the conveyance of agricultural products by railway in Italy. The cost of coal for locomotives—all fuel having to be

bought abroad, chiefly in England—renders impossible any great reduction in charges. When the rates were originally drawn up they were based on the tariffs existing in England and France, where coal is cheaper. This initial mistake has cost the railway companies a good deal, and makes it almost impossible for them to cut down their scale any further. The only preferential arrangement which can at present be made is a kind of contract between large growers of corn or producers of wine and the railway companies, on the basis of an undertaking that the traders shall fill, say, 2,000 trucks a year, and send them so many hundred kilomètres. A system of small railway packages for agricultural goods was introduced not long since. The rates for these are approximately *4d.* for one weighing less than 9 lbs., for a distance of not more than 140 miles; *6d.* for the same distance up to the weight of 15 lbs., and *7d.* up to 21 lbs., which hitherto has been the maximum limit for such consignments. Rates vary much, however, according to distance, the charge for a 9-lb. package up to 300 miles being *6d.*; for a 15-lb. one, *9d.*; and for a 21-lb. lot, *1s.* Beyond 300 miles the charges for the three sizes of packages alluded to are respectively, *10d.*, *1s. 3d.*, and *1s. 8d.* It must not be forgotten that by far the greatest amount of native products are consumed in Italy, only a small proportion of the pick of the oranges, lemons, eggs, truffles, and flowers being exported. The "Statistical Annual" published by the Ministry of Agriculture and Commerce, states that the value of the agricultural products which are not consumed by the peasants themselves and by the animals reared on the farms, is three times as much as the value of the exports. The total value of the products,

including those consumed at home and those exported, is computed to be 5,000,000,000 lire, or £200,000,000.

VIEWS OF AN EXPERT.

A wealthy Italian gentleman, who, from his wide experience of the conditions in different parts of Italy, and his extensive knowledge of large estates in the south, is able to give an authoritative opinion about the state of Italian agriculture and its possible developments, has given me his views.

"Agriculture in Italy," he said, "is progressing but slowly, very slowly. Gradually machinery is coming into use, as is proved by the fact that the manufacture of Italian agricultural machinery is now one of the most flourishing of Italian industries. Besides, we are importing a good deal from abroad, partly from England, though English machinery is costly, and is too heavy for our horses, which are lighter than the English ones. American machinery is best. It is light and strong. No doubt the hilly and rocky condition of much Italian soil makes it difficult to use machinery to advantage, but in the rich plains of the Puglie you will see harvesting carried on just as it is on the large farms in America."

"Then the Italian landlords are beginning to invest money in machine reapers and binders?" I asked.

"Yes," was the reply, "and in many cases where they cannot buy they hire. We expect to see a great development in the application of machinery during the next ten years. Within the last generation, that is to say, since the Constitution of the Italian Kingdom, enormous areas, which formerly were Crown

Lands or belonged to convents and monasteries, have been sold and broken up into small holdings. People, as a rule, bought these by paying an instalment every year, with interest on the sum still to pay. In most cases the payments have extended over twenty or thirty years, and they have naturally absorbed most of the resources of the purchaser. Consequently, he has been unable to spend much money in improving his land, his implements, and his stock. In some cases small holders have borrowed money, and have often ruined themselves, as the land is not productive enough to pay the interest on the mortgage and the instalment of purchase-money. But those who have been able to plod on till the land was really theirs, are now emerging from the purchase period, and will soon be able to devote their revenues to the improvement of their property.

This system, it was explained to me, did not apply to the large estates.

LAND TAX.

Nothing is more striking than the persistence with which landowners and farmers complain that an enormous proportion of their incomes has to be paid away in the form of taxation. Land in Italy pays taxes in three forms—to the State, to the Province, and to the Commune. The State taxation is levied very unequally, as the survey differs according to each province. There are in Italy twenty-two different surveys, some of which are 100 years old, and others of more recent date, but all have a different plan of rating property. Some time ago a law was passed for a new catasto or

survey to be made for the whole of Italy. But the old principle is still in force, and will probably continue to be in operation for fifteen or twenty years more. Once the Provincial survey has settled the rating the taxes are levied in the following way :—

Suppose the catasto in Tuscany rates landed property at 10 per cent. of the income derived by the owner for the State, the Provincial Administration has a right to increase the amount by one half, taking, of course, this extra half for its own purposes. The Communal Administration can next increase the impost by as much as the whole sum due to the State. Thus, if a landowner makes an income of 100,000fr. (£4,000) from his estate, the State or Government has a right to 10,000fr. (£400), the Provincial Administration to 5,000fr. (£200), and the Communal Administration to 10,000fr. (£400). The proportion of the income which the landlord would pay would therefore be 25 per cent. In some well-managed Provinces and Communes, however, the Administrations do not exercise their full right. But the reverse also happens, a great many badly managed Communes taxing illegally and raising their percentage to three, four, and sometimes five times as much as the Government rating. This is the case in several hundreds out of the 8,200 Communes. It is clear in these cases that either the Government rating must be very low or that only a part of the revenue is assessed. It is, however, a fact that in spite of the heavy taxation, Italian landlords are as wealthy a class of landed proprietors as is to be found in Europe.

When the new land survey has been completed, it will be easier for the Government to correct abuses and to remedy inequalities. It will take into account the

extent of an owner's estate, and will rate him, up to a certain point, in proportion to the income he ought to derive from his possessions. This reform should go a long way to break up the large estates in the south.

CHAPTER XXVII.

Farming in America.

MR. FREDERIC MARRYATT, of 16, Iddesleigh Mansions, contributes the following account of husbandry in Argentina.

As a sequel to the chapter on "Farming in Italy," a description of the very similar methods in use in Argentina may prove of service to those interested in agricultural matters. Unlike Australia and some other Colonies, where land is kept in a great measure in the hands of the Government, and only comparatively small estates can be held as private property, Argentina is owned almost entirely in the civilised districts by private individuals, the land having been bought originally from the Government, or in some cases granted by it. These "estancias" vary from one to fifty square leagues, that is, from 6,400 to 320,000 acres, or even more. Of course, many of these vast estates are at present used for the breeding of enormous herds of cattle and flocks of sheep, but those now intersected with railways are rapidly being converted into wheat land, and it is of these latter we have now to speak. There are three methods of working an estate, namely, by colonisation proper; by "medianeros," or men "on halves"; and by the landowner himself with the help of

day labour. Nearly all those employed in the first and second class are Italians, though there are a few Swiss and German colonies, and some of Russian Jews, founded by Baron Hirsch. The day labour is chiefly Argentine, as the Italian does not work well, except for himself. English are of no use in either capacity, as the heat induces thirst, and the British thirst is not conducive to sobriety.

The first method—colonisation proper—is prosecuted in the following manner: The whole estate is surveyed, and cut up into lots of 100 "cuadras," or about 400 acres. These lots are rented to one or more families for a term of three or five years. The colonist has to supply himself with everything, and gives to the owner of the land from 10 to 20 per cent. of the crops, according to the value of the land as gauged by its nearness to a railway station or other advantages. When these men are thrifty, and have a little reserve capital, they do remarkably well; but the great drawback from which they suffer is the necessity for living on credit from the "pulperos," or small country storekeepers, who swindle them most unmercifully, and manage usually to keep them in debt and absorb all their gains. These "pulperos" are mostly educated Italians, or successful colonists, and as the ordinary colonist cannot read or write, they do what they like with their unhappy clients. I know of no circumstances in which equitably managed Agricultural Banks would be of more benefit to the country in every way, and if the Government were what it ought to be, instead of what it is, such banks would long ago have been instituted. Three good years will, and often do, enable a man to retire to Italy with enough to buy a little farm and live in comfort,

according to his ideas. It is, however, when one or two bad years come, and no reserve capital is at hand, that he gets into the "pulpero" quagmire, and seldom escapes from it.

The second method—by "medianeros" or men "on halves"—is more or less the same as that described by your Rome correspondent, and is the cultivation of land in co-operation. Here the landowner supplies land and all agricultural implements, horses or bullocks, &c. The "medianero" gives all labour and food until the grain is stacked. The threshing is paid for in equal parts, and also the sacks, and the landlord and "medianero" then divide the product. This system is usually resorted to only by landowners who are too lazy to work themselves, or too ignorant to know how to carry on the business, and is not usually a success as far as I have seen. Labour is cheap, and also food, whereas machinery is very dear. The owner has also usually to keep an account with these men I have named for food till the wheat is sold, as they rarely have any capital. Consequently when there is a good crop they get more than a fair share of the produce, and when there is a bad year they invariably bolt, and the owner is let in for all their expenses. It is not, therefore, to be recommended as a system as far as Argentina is concerned, though it may very likely be excellent in a more civilised and law-abiding country.

The third system is the cultivation of the land by the owner with the aid of hired labourers, and this, for estates under 10,000 acres, I believe to be the best, provided the owner has sufficient capital and knowledge, and is not afraid of hard work. As was mentioned in a letter to the *Morning Post* on Currency, we pay labour

value in depreciated paper money, and are paid for produce in gold. Though the writer omits to observe that the price of produce rises and falls with the price of gold, still, the variation of labour value is not equally sensitive, and so such depreciated currency is in our favour in many cases. We sell also direct to exporters, and so avoid the spoliation of the middleman, and in every way reap the advantages of wholesale over retail dealings.

Colonisation in the first-described method is universal on the larger estates, for obvious reasons. The system of "medianeros" would require an enormous capital, and is besides unsatisfactory; while 10,000 acres is quite enough for one man to look after, as I can testify. If this simple system of colonisation were carried out under a stable and powerful Government, and proper assistance and protection given to the colonists, Argentina would speedily become the grain garden of the world. Perhaps it is lucky for the British farmer that it is not so ordered. "There is no rose without a thorn," and the Government is a very big thorn in the "rosa Argentina."

AMERICAN AND ENGLISH FARMERS.

A correspondent, signing himself "Englishman," sends the following interesting communication.

I was for some years in Minnesota, and have often compared English and American farming, not always, I am afraid, to the advantage of my countrymen. I noticed that men who farmed, say 160 acres, and went in for mixed farming, were in most instances the best off. They have co-operative creameries, or cheese

factories, where they take their milk, and have it weighed and separated. The skim milk is returned, and it does very well for the pigs. The Americans have co-operative stores, where they can trade their eggs, chickens, &c., in exchange for tea, sugar, clothes, &c. The farmers in America, as a rule, reckon that the sale of eggs and butter pays the household expenses. There the farmer fences his land with posts and barbed wire, which are cheap, and do not take up half the room that the hedges and ditches occupy here. I mentioned this to an Englishman, and he said it would spoil the country view. It is, however, hardly a case of view, but of living. The American is much ahead of the English farmer as regards machinery of all kinds, from the plough to the threshing machine. If he cannot afford to buy a machine outright himself, he will, as a rule, club in with a neighbour—a practice which is another name for co-operation. I saw a field of oats in Kent cut with an ordinary mower and bound by hand last year. As regards the Farm Labourer Question, I hardly think it is one of too much education. The labourers are becoming aware that they can get better wages abroad, in either Canada or the United States, and different surroundings. They can get from eighteen dollars to twenty-five dollars a month and their board, living with the family.

CHAPTER XXVIII.

The Rural Exodus.*

AMONG farmers at the present moment there is on the majority of questions more hopefulness than there has been for many years. I remember in 1892 how very dismal they all were. Prices were being lowered to the vanishing point. Landowners used to reckon up not what revenue they drew from land, but what it cost them to own it. Tenants were everywhere looking out for some less harassing means of earning a livelihood. There is a different feeling in the air to-day—a far more resolute hopeful outlook on the future.

But in one respect things have gone from bad to worse. The year 1898-99 will be remembered for what has been called "the rural exodus" assuming its most formidable proportions. Of course, this is an ancient grievance. It puzzled the Romans of old to keep labourers on the land, and in the history of our own country we find the difficulty cropping up in all sorts of

* The reader will note that wherever I went this topic cropped up. It absorbs the attention alike of those who are prospering, and those who are still under the clutch of depression, and is a difficulty abroad as well as at home. All that was possible in this brief chapter was to recapitulate a few of the leading facts, and glance at the reflections to which they gave rise. The matter is urgently in need of stringent and official investigation.

places, in the councils of statesmen, such as those who considered it in the time of Queen Elizabeth, in the propagandist work of a social reformer like Charles Kingsley, in the verses of poets to whom rustic labour has always made a successful appeal. The times are few and far between, though we have an example of them in the latter half of the eighteenth and the early years of the nineteenth centuries, when the rural districts were over-populated. William Cobbett, vigorously as he assailed "the great wen" which other people called London, did not attribute its growth to an undue draining of the rural districts. Within limits, indeed, this migration is not only harmless, but absolutely necessary to the well-being of the State. Despite the hygienic regulations which have so much improved town life, the wear and tear of commerce, the overcrowding which never can be abolished, the tax on nerve-force, the lack of exercise would speedily enfeeble our urban population, but for the new and vigorous blood imported from the country. But during the last fifty or sixty years, since railways began to be generally taken advantage of, this movement has assumed the nature of a depopulation; that is to say, the inhabitants of nearly all purely rustic hamlets and villages have been decreasing in numbers at the rate of from 4 to 10 per cent. every census.

There are one or two curious facts to be observed in connection with it. For a long time it was most observable in the remote country districts of the north, where farm labourers are exceptionally well off. During recent years only has it pressed hardly on the districts adjoining London. Possibly the birth-rate may have had something to do with that. The well-fed, well-paid

stalwart northern hind is not so greatly addicted to early marriage, and does not become the father of so large a family as the more puny labourer of East Anglia. It would almost appear that the less a farm hand is paid and the less he gets to eat, the more certain he is to marry almost before manhood, and to be responsible for a large family before he is past his prime. How many men in Hertford, Essex, Norfolk, and Suffolk I have met who, before fifty, had from ten to fourteen or fifteen children, and from 10*s.* to 15*s.* a week to live on! Is it credible that farm labour should ever become scarce in a district so reproductive! If so, it means that the migration to town is proceeding at an accelerated rate.

Only the other day the question arose in an excellently-managed East Anglian farm. The tenant and his wife were preparing to visit a neighbour.

"He has got a machine for milking cows," they explained, "and we wish to see how it works."

"But you would not care to have an appliance of that kind?" I said.

The wife, who has a famous dairy, answered, "There is nothing else for it, and still I am afraid. For my part, I don't think there can be any milking machine half as good as a pair of hands. If the thing was to go wrong"—she was addressing her husband now—"where would we be! There are seventy-two cows, and what would happen if the works of the thing stopped," she repeated the word "thing" with a great deal of emphasis, "went wrong and we had no milkers on the farm."

It was evident that there had been some conjugal discussion beforehand.

The husband said, "I have no great faith in it myself, but we are driven to use machinery owing to the scarcity of labour."

He then asked me to drive over with him to see the milking machine at work, and on the way expounded the difficulties of his position. As his case is typical of thousands more, it may be worth while to set forth his complaint.

MILKERS.

In the Eastern Counties it has become practically impossible to obtain female milkers. Some farmers have had to sell their cows for lack of them. For the better work of the dairy there is really an over-supply of female labour. Owing to the work done by lecturers and at various schools and colleges, immense numbers of young women are being fitted either to teach dairy-work or to superintend the making of butter and cheese. And on farms, mainly arable, where only a few cows are kept, there is not much difficulty. But on milk farms, where milking is an important business, women cannot be induced to undertake it. This is regrettable on more than one account, as a woman's hand is naturally more delicate and her touch more gentle than a man's. The work, however, is very hard, involving as it does a prolonged strain on the wrist, and the hours are terribly long, as the first milking has to be done in time to catch the early morning trains. Moreover, that dislike to hard manual labour which causes a girl to prefer the semi-starvation of a poor sempstress to the comfort of domestic service acts here also. The country maid of to-day shows a growing disinclination to undertake any of the heavy

tasks of the farm. As far as the Eastern Counties are concerned, she is no longer available for the task of milking cows. Like her brother, too, her hankering is all for London, and if the choice is only between various forms of work, she would rather choose to go as "general" to a city clerk's suburban home than perform the rough tasks of the farm. As far as she is concerned that exhausts the position.

As regards the men the situation can be put in a nutshell. Sir Michael Hicks-Beach, in his Budget speech, explained with great fulness the general prosperity of commerce. But agriculture is not classified among the thriving industries, and if you have one calling that is impoverished and many that are flourishing, the latter must inevitably attract men from the former. My friend did not generalise in that way, but told me concretely what had happened to his own labourers. I think he must be a very good master, because the servants about the place are all oldish men, who worked for his father many years ago. It is the youths who will not stay. He says they are attracted to London by an abnormal activity in the suburban building trade. They are not really better off as labourers to masons, since, though wages are higher, so are food and lodgings, so that when these are paid the net income is not really increased. But they like to have the larger money to pass through their hands, and then the life and bustle of the streets pleases them more than the dulness of country life. Milking cows, again, is not a very lively calling. A milker has to be up at half-past four or five in the morning, and, with short intervals between, works till seven or eight at night. My informant said that such men as are left are increasingly difficult to deal with.

They know that there is nobody to take their places, and, accordingly, they are very independent. If he gives them one day's holiday they take two, and know well that he cannot afford to do more than grumble, since they are only too glad to give up at a day's notice.

OTHER CALLINGS.

It would, however, be wrong to assume that this state of things is confined to milking and bricklaying. From the West, the Middle, and the North of England, exactly similar accounts are to hand—the great towns are absorbing the rural population. In Kent the labourers are demanding more wages, and threatening to go out on strike if they are not forthcoming. One can scarcely take up a country paper without finding evidence that shepherds and ploughmen, hedgers and ditchers, are all being drawn away by trade. One noticeable effect of it is that farmers are being driven to substitute machinery for hand labour wherever it is possible. They are learning to do without the men, and a first-rate farm now offers a most interesting show of mechanical contrivances. And here is a point to be noted in passing. When I see a new piece of machinery at work I usually make a point of asking where it came from. The answer at present is almost invariably "from America." For the time being we are outdistanced in this manufacture by the United States. Probably that is only temporary. In the seventies very much the same sort of thing occurred, and American implements were in use everywhere. But English manufacturers pulled themselves together, and in the eighties and early nineties got

command of the market—Leeds distinguishing itself especially in the competition. Now the tide has changed again, and the Americans have the best of it. Let us hope it will not be for long.

In one way this enlarged use of machinery tends to raise the status of the agricultural labourer. Instead of being classed among unskilled workmen he needs now to be an expert mechanic, and is accordingly worth more to his employer. It is a case of fewer men and better wages, one farmer said to me. Still, when all that is said, the system has great disadvantages. Let mechanical inventions be multiplied as they will, it is inconceivable that a time will ever come when the farmer will not require at least the occasional services of large gangs of workpeople. When, for instance, a hay or a corn crop is to be saved in a hurry, it is absolutely necessary to have men at command. This was proved very conspicuously in harvest time, when the scarcity of labour was severely felt over the whole length and breadth of the land. How to overcome this difficulty is a serious and practical question now perplexing many a farmer who otherwise would be rejoicing that he has been able to see an end to that long vista of depression that has stretched before him these many years. But it is no easy matter to see how a farm is to be conducted with a very small body of workers, and yet have a large staff to depend on in case of emergency.

THE REMEDY.

It would be interesting to know how far the present migration is temporary in its nature. No doubt to a large extent it is stimulated by the prosperity of trade.

If business were to become dull again—and past history shows how much it is subject to ebb and flow—town life would inevitably begin to lose some of its attractions, though even then the educated modern peasant, full of ideas gleaned from school and newspaper, is likely to prefer a town life. But, on the other hand, several rural occupations are growing. Market gardening, for instance, and other forms of intensive cultivation, facilitated by improved means of transit, can now be conducted profitably, even at a great distance from town. To take one example, the Great Eastern Railway Company has vastly helped this industry all over East Anglia. As we have seen, it not only has arranged a moderate scale of charges, but issues from its office a pamphlet containing the addresses of such people in the district as are able and willing to send on a supply of farm produce—butter, fowls, eggs, vegetables, and so on—to private consumers in London. The amount of good done by this arrangement is incalculable, and it were greatly to be desired that other Railway Companies would imitate this excellent example. Of course, the Parcels Post has been of great service in the same way, and much is expected from the Light Railways. These agencies ought to make it much more practicable for *la petite culture* to be carried on at a profit, and where many are engaged in that the farmer will have no difficulty in obtaining occasional help.

It is in this direction that we must look for a solution of the difficulty. On the large grass farms now in vogue there never can be any great demand for continuous labour of the ordinary agricultural kind, though it is equally certain that a huge dairy cannot, even when machinery is utilised to its utmost limit, be worked

without hands. The difficulty about many of the more ingenious contrivances is that at a critical moment they go wrong, and no one is on the spot to put them right. Now if a man or a woman falls sick, or meets with an accident, another pair of hands can usually be obtained without difficulty, and this constitutes the great merit of manual labour.

THE MODERN SPIRIT.

The modern spirit everywhere seems to be intolerant of rural labour, and the very difficulty we have been considering more or less is being experienced by every nation under the sun, even in many of our half-populated colonies—in Canada and Australia, for example, and in the farming districts of America. Never was the country more prized for its pleasure, never more hated for its work. And that being so, it is altogether hopeless and impossible to stem the current; the most we can do is to reduce it within reasonable dimensions, and that is to be accomplished only by making the life as profitable and as little irksome as possible, objects which may, in part at least, be achieved by the encouragement of intensive cultivation. The question is, however, assuming such very large proportions, and the movement is so pregnant with danger to the country, that it becomes a duty to join with those who are urging the Government to institute a thorough inquiry into the causes of the rural exodus, and what steps can be taken to reduce its dimensions.

CHAPTER XXIX.

The Views of Sir John Bennet Lawes.

To a representative of the *Morning Post*, whom he received one day in early summer at his beautiful Old English home at Rothamsted, in Herts, Sir John Bennet Lawes made the remark that he was probably the oldest farmer in England. Sir John entered into possession of his hereditary property in 1834, and in that year he commenced practical farming, so that he is to-day an agriculturist of sixty-five years' standing and experience. He is at the same time much more than a farmer, for the series of scientific experiments in agriculture begun at Rothamsted in 1843—which under a Trust Deed will be carried on after his death—are renowned not in this country alone, but wherever the art of agriculture exists in its highest and best form. The views of such a man on any question affecting the present position and future of agriculture are naturally of value and importance. Sir John Lawes, to begin with, is not a pessimist in regard to agriculture. He does not believe that matters have reached, as some people at least affect to believe they have, such a pass that the oldest and most honoured of all our industries is threatened with extinction. Neither, on the other hand, is he prepared with any patent panacea for imparting new life into agriculture and

restoring it to the splendid position it occupied in days which he well recollects, when farmers used to boast that they made a clear pound of profit out of every acre of wheat they grew. A policy of plodding onward, of alertness, and of greater adaptability to new circumstances and conditions, sums up the advice he would be disposed to give to his brother agriculturists.

AN AGRICULTURAL DOCTOR.

"Really," Sir John observed to our representative, "what is there new about agriculture that I can tell you? Your Commissioner does not appear to stand in need of any special enlightenment on the subject, and I may as well tell you at once that out of the resources of my own long experience I have no project to advance which could be made applicable to all cases alike. You might as well ask a doctor to prescribe a universal remedy for all diseases. The peculiarities of the climate, the nature of the soil—all sorts of things must be taken into account. I daresay if a farmer were to come and consult me, as a sort of agricultural doctor, as to how he could get the most out of his land, I might be able to give him some useful advice, but what would apply to his particular case might be totally unsuited to hundreds of others. I am sure the remedy does not lie in what is called 'higher cultivation.' In many instances agriculturists have farmed quite as high as they dare, and some of them are finding it out. It must be obvious, I think, to any one that increased crops cannot meet the root of the evil—lower prices."

DECADENCE AND FOREIGN COMPETITION.

From out the storehouse of his reminiscences Sir John Lawes harked back to the time when farmers laughed foreign competition to scorn. Afraid of the foreign wheat-grower? Not they.

"You see," said Sir John, "in those days they cherished the delusion that, apart from all question of the levying of a duty, it would also cost something like 5*s.* per bushel to land in this country wheat grown abroad. They could not foresee—who could?—the enormous cheapening of carriage by sea and land, through the growth of competing steamboats and competing trains, which has been so remarkable a characteristic of the Victorian Era."

"Then to what do you attribute the decadence of agriculture? When did it set in?"

"That is not so easy to answer as you may think; but I may tell you that the competition of the foreigner, which becomes keener every year, and to which there is apparently no limit, is at the bottom of the trouble nowadays. Of course it does not account for everything. Farmers throve amazingly for years under the operation of Free Trade. Then there came in the early seventies a series of bad, wet seasons all over Great Britain. The farmers were disheartened, the foreigner had a buoyant time, and prices came down with a run. They have, as you know, been going down ever since. Frankly, I see very little chance of an all-round improvement in the general conditions of farming. Science has done all it can, and the farmers' wits must do the rest. I really wish sometimes farmers were not so conservative in their ideas—of course I don't

mean political ideas, but in their ways of doing things. To give you a single instance. I have for years been urging them to sell their bullocks by weight, but they won't do it. They prefer the old happy-go-lucky method of 'judging' an animal, and disposing of him accordingly."

"PROTECTION" IMPOSSIBLE.

"Holding the views you do about foreign competition, would you suggest anything in the nature of a return to Protection?"

"No, emphatically no. The country won't stand it for a moment. If the Government declines to help the West Indies over the Sugar Bounties, what hope can there be of introducing a shred of Protective legislation for the farmer—in the shape of a duty on foreign grain? You cannot even get Parliament to stop the colouring of margarine. The moment you proposed a duty on foreign wheat, which would raise the price of the loaf even by a farthing, you would have all the great industrial classes of the country down on you—and they are the vast majority of the people. Besides, apart from any question of political or other expediency, I am a convinced Free Trader. There can be no question that Free Trade has been a great gain to the country at large."

THE FARM LABOUR PROBLEM.

The problem of the labourer and his relation to the land Sir J. B. Lawes regards as one of the most serious in the whole agricultural situation. Sir John is a very

large, as well as a very generous, employer of labour, as the people of Harpenden will cheerfully testify; but even he feels somewhat acutely the pinch of the labour difficulty. The rising generation, it would seem, has lost all desire to stay on the soil. They lust after great cities, and while there is plenty of work for them on the land, and a good comfortable living to be made, they prefer the excitement of town life, even though it should involve a fierce scramble for daily bread. As a personal illustration, Sir John narrated the gist of a conversation he had just had with his farm bailiff:—

"How many labourers have we just now?"

"Seventeen."

"No young men, I suppose?"

"Yes, one of twenty-four."

"That's very odd; how do you account for it?"

"Well, you see, Sir John, he has not been educated, so he prefers to stay at home."

Sir John went on to explain to our representative that to maintain the continuity of his scientific experiments he must have labourers at any cost.

"If I pay them a guinea a day," he said, "I must have them, and as it is I can only get old men. The young lads will ask you quite frankly, 'Why do you educate us if your only object is to bring us up to follow the plough and go herding the cows?'"

The provision of allotments, he thinks, has done very little to keep the labourers in the rural districts. The older men, of course, appreciate them, but to the younger ones, especially those of them who have been smart at school, a pastoral life presents no attractions. Sir John himself has let off freely, yet the migration townwards flows on unchecked. He confesses he knows of no remedy.

CO-OPERATION.

Sir John admits that some good may be achieved by co-operation among farmers, particularly in the matter of the collection of their produce and its transit to the consuming centres. Milk, cheese, eggs, poultry, vegetables, and so forth, might be made to yield a better return under the application of co-operative principles.

"But," he observed somewhat plaintively, "the average English farmer is so independent, and so adverse to change, that it is difficult to get him to apply the principles of combination or to induce him to believe in its benefits. He is a very good farmer as a rule, but he does not like to have the even tenour of his way interrupted by new-fangled notions."

Sir John saw no advantages in co-operation as applied to the growing of grain crops. Of course, as to wheat, hardly though he had been hit by the fall in the price of that commodity, the farmer must still continue to grow it for the sake of the straw. It was well-known that oaten and barley straw did not possess the same substance, and the straw of the wheat was necessary for certain purposes. The talk about co-operation naturally led to a discussion on the way in which farmers ordinarily consign their produce to the markets. Sir John himself recently heard from a large importer and dealer in Leadenhall Market complaints on this score. The French consignors, for example, send over their turkeys at Christmas time carefully classified and arranged. One box contains turkeys all of 16lbs. weight; another, birds of 12lbs. weight; a third, turkeys of 10lbs., and so forth; whereas the Norfolk turkeys are sent "all anyhow," and the salesman at an excep-

tionally busy time is left to do all the classification, &c., for himself.

"I think," Sir John said—"and I merely mention this as one example—it would be a good thing for the Norfolk farmers to have a little combination under which each turkey would be carefully weighed, and the consignments arranged according to weight. They would not only assist the salesman, but they would gain the advantage of reduced railway rates for packages in bulk.

THE FUTILITY OF LEGISLATION.

Sir J. B. Lawes does not believe in any legislation which is likely to rehabilitate agriculture as a whole, or to restore it to the high water-mark of prosperity it enjoyed in days not very remote.

"You have had Royal Commissions," he remarked, "and no end of Blue-books crammed with all sorts of suggestions. And yet ask yourself what has been the result? Circumstances have changed. I well remember the time when agriculture was the 'predominant partner' among industries in this country. Now it is not. You have great manufacturing concerns everywhere. The towns are usurping the place of the country, and the dwellers in the towns are desperately jealous of anything that seems to give agriculture an advantage or to extend to it any special form of 'protection.' Look at that modest little affair, the Agricultural Rating Act. The Government were soundly abused over it, and the advantage to either farmers or landlords has been infinitesimal. Mind you, in this matter I do not think it is quite fair to leave the landlords altogether out of

consideration. Some of the smaller landowners—those absolutely dependent on agricultural rentals—have been hit more hardly even than the farmers. Most of the latter have managed somehow or other to struggle on, and are still growing wheat. We have hardly got such a thing as a derelict farm in our neighbourhood, though I know they have been plentiful in Essex. That, I think, is because Essex is a very stiff soil, and farmers there were too exclusively absorbed in the growing of wheat. You must think of other things besides wheat-growing, and I occasionally wish some of our farmers here would take a lesson from our American friends in matters of enterprise and adaptability. Individually, I have been able to do a great deal more for America than for my own country, and the United States Government is now spending £30,000 a year on agricultural research and experiment."

As a parting word, Sir John once more impressed the fact that he has no great scheme of agricultural reform.

"It would be deluding the public," he said, "to pretend that I have."

THE END.

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